

CHEETAL

A Journal of the
Wild Life Preservation Society of India



VOL. 3

OCTOBER, 1960.

No. 1

Wild Life Preservation Society of India.

I. The aims and objects of the Society are as follows:

- (a) To promote interest in the preservation and conservation of all forms of animal life among the youth of the country.
- (b) To assist in enforcing the game and arms rules and to bring to the notice of the authorities any infringements of the same.
- (c) To advise and help Government and the District authorities in the formation, maintenance and protection of Sanctuaries and National Parks.
- (d) To raise funds for the carrying out of the above aims and objects.
- (e) To carry on any other activities which will serve the above objectives, including publicity and propaganda and the issue of a journal.
- (f) To assist members of the Society in obtaining shooting and fishing facilities and facilities for viewing and photographing wild life etc.

II. The Society has, upto date:—

Patrons	...	18	Educational members	...	12
Life members	...	32	Professional members	...	30
Ordinary members	...	122	Honorary members	...	9
Institutional members	...	13	Student members	...	72
Affiliated members	...	4	Family Member	...	1

Total Membership is 313.

The Society's funds stand, so far, at Rs. 11,500/-

III. Office Bearers and Members of the Executive Committee.

President:—The Maharaja of Nabha.

Executive Vice President:—Shri P. D. Stracey, I.F.S.

Vice Presidents:—Shri R. L. Holdsworth.

Dr. Bains Prashad.

S. Ranbir Singh.

His Highness the Maharaja of Kotah.

Hony. Secretary:—Shri Gurkirat Singh Mann.

Asstt. Hony. Secretaries:—Shri M.A. Edwards, Shri Ram Prakash,
Shri J. N. Onial, P.F.S. (Retd.)

Hony. Treasurer:—Shri M. L. Khanna, C.F. (Retd.)

- Members*:—1. Dr. John C. Taylor (Sr.), Bhogpur, Dehra Dun.
2. Shri B. Mitchell, Arcadia Tea Estate, Dehra Dun.
3. Capt. E. G. Melvill, Parsonage Cottage, Landour, Mussoorie.
4. Shri Tej Bahadur Singh, 11, New Cantt. Road, Dehra Dun.
5. Shri Narendra Singh, Col. Brown Cambridge School, Dehra Dun.
6. Maj. E. G. Mainwaring, Cambrian Hall, Dehra Dun.
7. Lt Col. C. W. Adams, Clement Town, Dehra Dun.
8. Col. A. N. W. Powell, Landour, Mussoorie.
9. Brig. Gambhir Singh, Dehra Dun.
10. Dr. R. S. Gupta, Dehra Dun
11. Dr. S. L. Goyal, Dehra Dun.
12. Shri S. K. Sangal, Dehra Dun.
13. Secy. Wild Life Club, F.R.I. & Colleges, Dehra Dun.
14. Secy. Shikar Club, Indian Military Academy, Dehra Dun.
15. Shri H. K. Dang, The Doon School, Dehra Dun.
16. Capt. Reginald Sawhney, New Delhi.
17. Mr. Malcolm Blakeney, Jamshedpur.
18. S. Vevek Singh Majithia, Gorakhpur (U.P.)

Ex-Officio Members.

Chief Wild Life Warden, U.P., Lucknow.
Wild Life Warden, Tehri Garhwal, U.P.
D.F.O., Dehra Dun.
D.F.O., Saharanpur Division, Dehra Dun.

District Magistrate, Dehra Dun.
Superintendent Police, Dehra Dun.
Conservator of Wild Life, Punjab.

Sub-Committees.

- | | |
|---------------------------|------------------------------|
| (1) Wild Life Legislation | (3) Education and Propaganda |
| (2) Publicity | (4) Fishing. |

Postal Address:
7, Astley Hall,
Dehra Dun.

CHEETAL

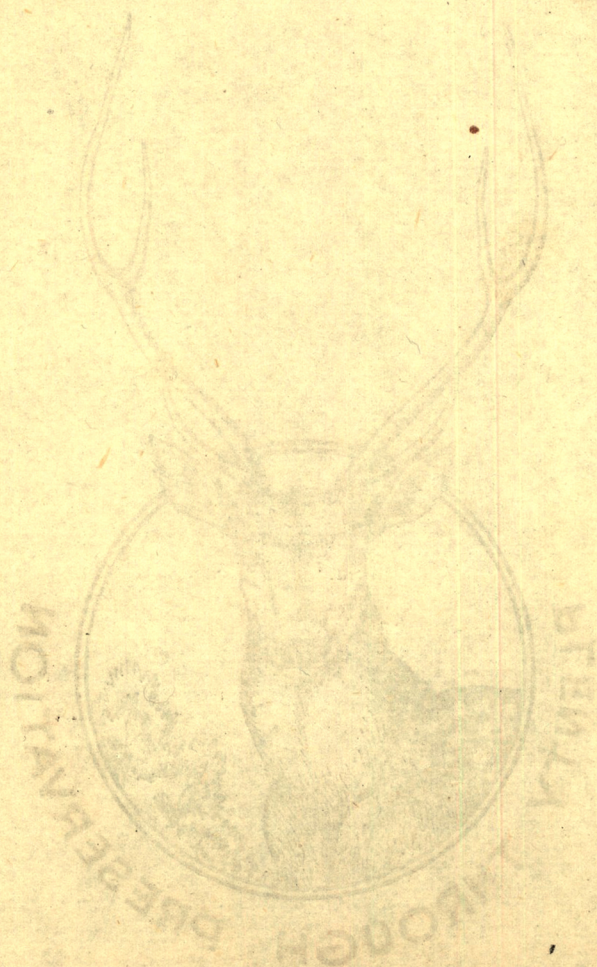
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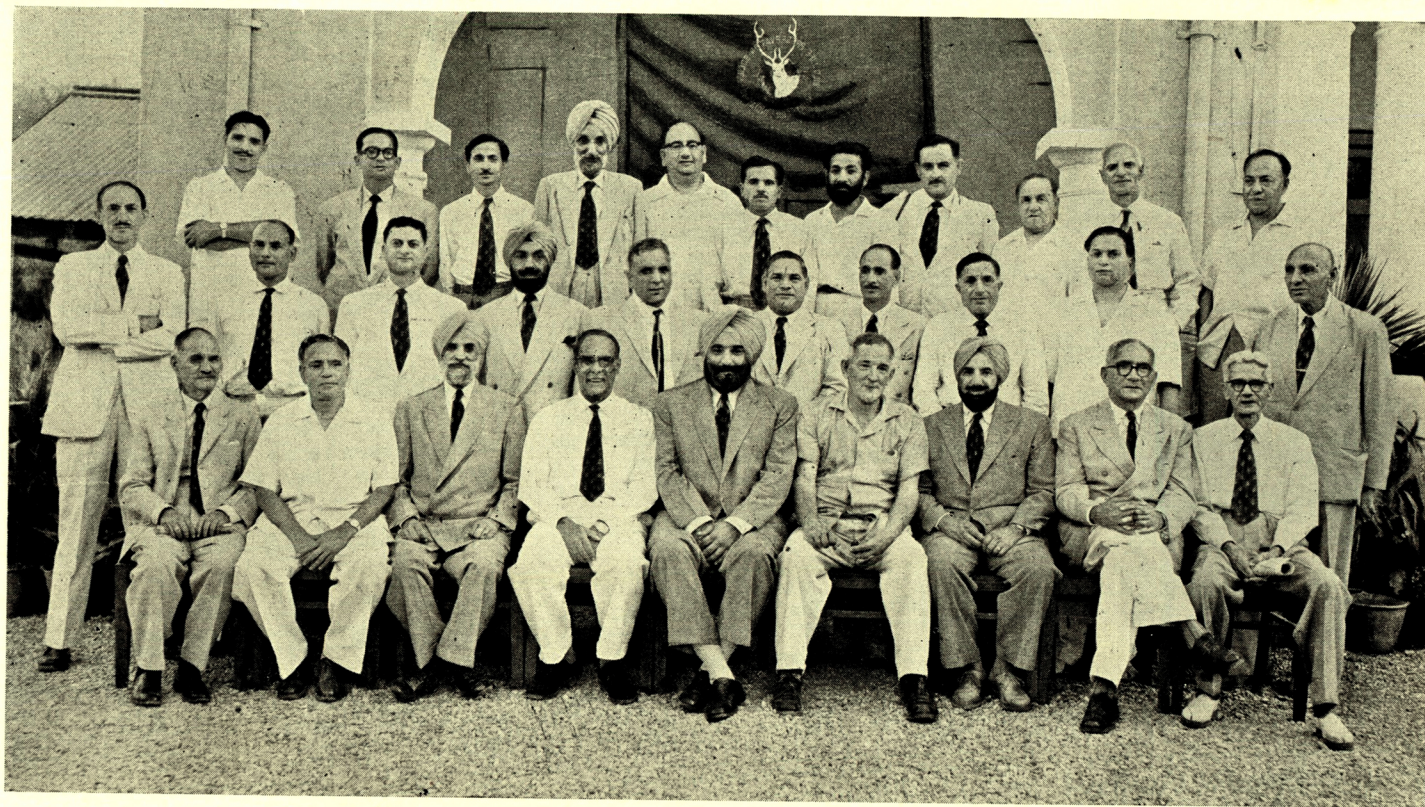
CHEETA

A Journal of the

Life History of the Cheetah



THE WILD LIFE PRESERVATION SOCIETY OF INDIA—ANNUAL GENERAL MEETING, 1st MAY, 1960.



Sitting (L. to R.) :—Shri Tej Bahadur Singh, Shri S. S. Negi, CF (Retd.), S. Ranbir Singh, Shri P. D. Stracy, IFS (Executive Vice President), His Highness The Maharaja of Nabha (President), Shri R. L. Holdsworth (Jr. Vice President), Shri Gurkirat Singh Mann (Hony. Secy.), Dr. Bainsi Prasad, Shri M. C. Khanna (Hony. Treasurer).

Standing 1st Row (L. to R.) :—Lt. Col. C. W. Adams, Shri M. A. Edwards, Shri M. A. Rashid, Maj. R. S. Virk, Shri P. N. Bahri, Sh. Narendra Singh, Maharaj Kumar Amar Singh of Bijawar, Shri B. B. Wadhvani, Dr. S. L. Goyal, Capt. E. G. Melvill.

Standing 2nd Row (L. to R.) :—Shri Solanki, Shri K. K. Nair, Shri K. L. Mehta (Dy. Game Warden, H.P.), Shri Balbir Singh (Hony. Secy., Wild Life Club, Chandigarh), Shri B. N. Chaturvedy, Shri S. K. Sangal, Shri V. J. Binney, Shri Malcolm Blakeney, Shri B. Mitchell, Shri Arjan Singh, Shri R. L. Rynjah.

Wild Life Preservation Society of India

Vol. III }

October, 1960

{ No. 1

Ourselves

I. THE SOCIETY.

In April 1960 a significant step, which we had been contemplating for some time, was taken: our Society was expanded into an all-India body. We are now "The Wild Life Preservation Society of India", the word *Northern* having been dropped from our title. At the same time our revised constitution was adopted. Details of the special General Body Meeting in question are given elsewhere, and here we intend only to touch on the main features of the new set-up.

We could have formed ourselves into an all-India Society initially, but we hesitated to bite off more than we could chew, for one thing. Besides, we are convinced that there is room in India for more than one organization like ours. But after waiting for two years, and in response to a growing demand from conservationists in other parts of the country for a 'mouth-piece', we decided, withal somewhat reluctantly, to enlarge our jurisdiction. We are under no delusions in regard to the difficulties of the tasks ahead of us. A mere change of name means nothing, nor for that matter an increased jurisdiction, if that is only on paper. The future of our society lies in active work for wild life through Branches in the various parts of India, for which our new constitution provides, and until and unless such branches are formed and become active, we shall not be satisfied.

2. THE CHEETAL.

Our organ, the "Cheetal", which is the main attraction for members and public at present, is also now an all-India publication. It has been improving with every issue, as a comparison of the fans issues which have been so far put out will show, and has been attracting increasing attention. It is our ambition that the magazine will someday be on a par, so far as printing, paper and presentation is concerned, with the best of similar magazines in the world, though how that can be achieved in consonance with our objective of keeping the price as low as possible, is the question. But, as many must have realised, such publications are extremely difficult to maintain over the years. Therefore, both members and readers

are earnestly requested to support us, with contributions, photographs and increased subscribers. The "Cheetal" has been described as 'a magazine with a difference', and we want it to continue as such—only more so—and to reach all lovers of wild life.

3. MEMBERSHIP.

Our membership continues to grow steadily, as also the number of readers of our magazine. But we are not satisfied. As the recognised custodians of wild life in India, unless the forest departments of the various states support us more than they are doing, they will, we feel, be not discharging their duty towards the wild life of the country. We want every forester in a senior position to become a member of the Society, and every D.F.O. and Range Officer to read the magazine. This is a challenge to India's foresters: will they take it?

But it is not only through the interest of India's forest departments that her wild life can be saved: there are the services in general, and particularly the civil and police, who so often have the fate of wild life in their hands in the course of day to day administration. The extent of ignorance of, and indifference to the problems on their part is not realised. It is the aim and desire of the society to help dissipate these clouds and to create an atmosphere, both understanding of and helpful to, wild life in the minds of our administrators in general.

Then there is the public, with whom the final say rests. The problem of reaching the widest public, in our efforts to save the wild life of India, is one that besets us. Letters to the press are but drops in the ocean, and with our meagre funds we cannot afford any large publicity or propaganda. Yet we are hopeful that our Corbett Memorial Prize competition for young people and our Balance of Nature "Snake and Ladders" game will prove attractive and carry the message of live and let live to India's people.

WILD LIFE BOARDS.

Himachal Pradesh have constituted a Board to deal with the protection of wild life through legislation, co-ordinated with practical measures. The importance that has been given to the matter can be seen from the fact that the Board comes directly under the Lieutenant Governor.

There is an indication that the Government of Uttar Pradesh is thinking on the same lines. Taking into consideration that wild life in the U.P. has dwindled in the last decade to a fraction of what it was, the formation of such a Board is long over-due, and we welcome the news.

We eagerly look forward to the early establishment of a Wild Life Board in the U.P., as above other things, it would assist our Society very materially in our approach to the Executive.

EDITOR.

Editorial

Progress.

The Society is now two years old, and our biggest stride forward has been in gaining recognition in some of the States in the South. As we are now an 'all-India' organisation, it is our intention to make ourselves heard in the new States, which we have now embraced, in an effort to save our dumb denizens of the forest from extermination. It is our earnest hope that more members will be coming forward from the more distant States, and that many of them will offer themselves as Office Bearers, and stand for election to the Executive Committee. We would encourage members to open more branches in the various States so that we may be fully represented, and be in a position to make our presence felt throughout the Indian Union.

The Constitution of the "Wild Life Preservation Society of India" was placed before an Extraordinary General Body Meeting on the 15th April, 1960. After it had been discussed in detail the Constitution was unanimously adopted, and it has been submitted for registration.

The Society has now acquired a separate office at 7, Astley Hall, Dehra Dun. It can now be said to be truly launched, with a home of its own. The office started its existence in the late Dr. Shome's clinic, and we were very grateful to him for his unstinting support and the assistance he gave to the Society.

The Society now has 307 members against 172 members in the year 1958-59.

The Audit report has revealed that, although the income from subscriptions has increased from Rs. 1,162/- to Rs. 3,098/-, the expenditure has also increased from Rs. 1,779/- to Rs. 5,088/-. The financial position of the Society is as it was last year with the Bank balance having increased slightly from Rs. 10,304/- to 10,369/-. Our readers will see from this report that the Society is sparing no efforts in any direction in order to further its cause in grappling with an enormous problem as expeditiously as our resources will permit. If we are to save our wild life for future generations, it is incumbent on us to take urgent steps in the matter, and the question of accumulating reserves must necessarily take second place till every individual, official and non-official, becomes conscious of wild life preservation, and effective steps are taken throughout India to implement measures for protection.

During the year ending 1960, the Executive Committee of the Society met six times, the Legislation Committee twice, the Fishing Committee three times, and the Education and Propaganda Committee three times. The Publicity Committee, which also handles the publication of the "Cheetal", met three times.

The Fishing Sub-committee has completed the take-over of the junction of the rivers TONS and JAMUNA from Kattapathar to Dakhpathar with the object of conservation of fish, and to provide its members, who are anglers, with a stretch of water which can be called our own. The Committee has also drawn up rules for angling in these waters, and for its patrolling and protection from the poacher, to which this stretch was particularly subjected in the past.

It was decided to have no separate Shikar Committee, but that its functions should be carried out by the Legislation Sub Committee. The Legislation Committee is, therefore, working on a resolution to cater for the needs of sportsmen desirous of shooting small and big game. The Committee is making efforts to obtain shooting blocks from the season commencing October 1960, and also monthly small game permits commencing from the same period. Applications will only be made for shooting blocks in the U.P., as owing to the new system of drawing for blocks, and the restriction of only the second fortnight in the month being open for big game shooting, it is extremely difficult for sportsmen to get a block in the U.P. However, any blocks or small game permits allotted to the Society will also be open to members of this Society residing in other States. There is no particular restriction in other States as regards the allotment of shooting blocks, where a season's permit is given in some States, while in others it is fairly simple to have a block allotted, if not for the period required, certainly within a few days of it.

Continuous efforts have been made to have the Society's revised and rationalised shooting rules accepted as a model, partly, if not completely, by the northern States. The U.P. Government has asked for two copies of our suggestions as a result of our deputations to the Governor, Minister of Forests, Secretary of Forests, and the Chief Conservator, and these copies of our suggestions have been sent. Rajasthan has had our suggestions under consideration. Himachal Pradesh has accepted practically all our suggestions, except the close seasons.

The U.P. Government has been approached on the question of the Annual Small Game and Fishing Permits being restored, and a revision of the new system of drawing for shooting blocks. A considerable amount of propaganda was carried out through the press to draw the attention of the authorities to the difficulties and inconvenience caused to sportsmen through the new system. Although we were promised favourable consideration, no reply has yet been received to our suggestion from the U.P. Forest Department.

Foreign and other journals available.

From now on, the undermentioned journals and magazines pertaining to wild life will be available for members. A proposal was considered by the Publicity Committee for the circulation of these periodicals amongst members of the Society. It was, however, felt that

the procedure of circulating reading matter was impracticable as it would entail a tremendous amount of work and require a separate staff to be employed for the purpose. It would also cause a lot of inconvenience for members who called at the reading room to read any particular publication.

Journal of the Bombay Natural History Society.

"Oryx"

The New York Conservationist.

Outdoor Life—when available locally.

Field and Stream—when available locally.

"Loris"—a Journal of the Wild Life Protection Society of Ceylon in exchange for the "Cheetal".

Nyasaland Society Journal (in exchange for the "Cheetal")

Audoban Magazine (in exchange for the "Cheetal")

Kenya Wild Life Journal (in exchange for the "Cheetal")

Living Wilderness (in exchange for the "Cheetal")

We would like, very much, to cater for our outstation members and would invite suggestions from you as to how we could best do this. The question is much simpler where zonal branches have been established, and where reading matter could be provided by those branches—with perhaps some assistance from here. The problem is about places where branches do not exist. Circulation of the publications we receive here is out of the question, I think you will agree, because they would be received too late by most members, are liable to be received in a torn and ragged condition, and sometimes not received at all, as losses are inevitable in the post. Circulating to branches is a possibility as long as they are few in numbers: This would only partially solve the problem, but would not give anything like sufficient coverage. Another alternative may be to offer to members publications—which have been purchased—in which they may be interested, at a nominal charge. Here the draw system would ensure a fair and equitable distribution.

The Library at Dehra Dun is housed in the Wild Life Society Office at 7, Astley Hall. It is open to members on all days, except Sundays, from 10 A.M. to 1 P.M., also from 5-30 P.M. to 7 P.M. in the winter, and 6-30 P.M. to 8 P.M. in the summer.

The Journal "Cheetal".

We would like to produce an even more interesting journal, but very few articles are being received for publication. It is fortunate that Mr. Stracey, our Executive Vice-President, is also interested in the 'get-up' of the journal, and so the regular production features have so far been entirely due to his efforts. We earnestly appeal to our readers, particularly

those who are in States other than the U.P. to support us with their contributions of articles, sketches, and anecdotes, whether in Hindi or English, so that we may be able to produce a journal which is truly representative, and of interest in all parts of our vast country. We would also like photographs of wild life, sanctuaries, and any other subject which you consider may be of interest to the Society.

We have made some alterations in our emblem. The brow-tines of the Cheetal were previously shown bending inwards; the antlers were not shown as slender as they normally should be, while they swept out and upwards in a deep curve, making the animal appear more like a Sambhur, but for the spots. These details have now been corrected. A motto has also been introduced into the emblem, 'PLENTY THROUGH PRESERVATION'. It is apparent from the wording that although the Society stands for strict protection of game from destruction by indiscriminate killing, we do want to conserve, and thereby provide 'plenty', not only to satisfy our aesthetic sense, but also to provide sport for those who would like to pursue it in the traditional manner with gun, rod or camera. Although we have made efforts to improve our emblem, we feel that the Cheetal's head could be made to look more realistic. A photograph would be of great help in this respect and we would ask you to send us a suitable one for the purpose.

You will have noticed that we have started a "Young People's Corner". A good start has been made with some very interesting articles and photographs from Mrs. Yvonne Imam of Hazaribagh, Bihar. While thanking her for her valuable contribution, we do hope that she will be a regular subscriber to this section. It is the young who, at some time in the future, will continue the work which we have started, and we must encourage them from now. We must build up the "Young People's Corner" and in this we seek the support of other members of the Society as well.

Commencing from this issue, we have opened a page for advertisements of members and non-members who would like to sell or purchase fishing tackle, arms, books of interest to sportsmen, anglers, naturalists, also for other sundry sporting goods. The rates are as follows:—

Rs. 1.00 per line for Non-members.

Rs. 0.50 per line for Members.

There is a suggestion that we may devote some pages in this journal to deal with questions and answers on problems which may be put to the Society by readers: We have been asked to deal with matters on wild life conservation, natural history, shikar, angling, and other allied subjects. We will be going into this matter in greater detail at the next meeting of the Journal Committee to see whether it will be possible to select a panel of experts to

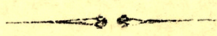
deal with such problems, and also to decide on the exact procedure to be followed. In the meantime, we will accept any queries you may have.

We are very grateful to the Chief of the Army Staff for having taken a personal interest in our Society. It is mainly due to his efforts that a large number of Army Units are now subscribers to the journal. We would also appeal to the other Services also to give us their support, for although they are not largely represented at Dehra Dun, we would remind them that we are an 'All India' organisation. The Forest Departments of Andhra Pradesh and Rajasthan are subscribing to this journal for their Conservators and D.F.O's, and we look forward confidently to Forest departments of other States also, which departments are custodians of our wild life, to give this Society their active support.

The Publicity Committee offer their thanks to all those who have sent in articles for publication; also to the Editors and Authors of articles, appearing in this issue, for according us permission to reprint their articles.

We are indebted to our President His Highness the Maharaja of Nabha for the keen interest he has taken in the affairs of the Society. We are equally indebted to Mr. P. D. Stracey, I.F.S., the Executive Vice-President, who has been a real pillar of strength in guiding the Society so ably in all its workings, and putting it on the map in such a short space of time. There has been a great deal to do during the last six months in consolidating the work of the Society. The Honorary Secretary, Sardar G.S. Mann has devoted much of his time to this, and we are thankful to him for the good work, and interest he has taken. Our thanks also go out to the Hony. Treasurer, Shri M.L. Khanna, who has been attending to his duties in spite of ill health, to the two Asst. Hony. Secretaries, and to the Chairman of our sub-committees, who have all worked for the betterment of the Society.

Although we have had the co-operation of everybody, we still need more help if we are to fulfil the tasks we have set for ourselves to do. We strongly appeal to members and other readers of this journal, particularly those from other States, to send us material and photographs for publication; also to publicise the work and aims of the Society, and to canvass their friends and associates to join as members. We would also appeal to the Forest Departments of all States, the Services, and other Government departments throughout the country to support us in this very worthy cause.



The Prime Minister's Pandas

We were very grieved to learn of the death of the Prime Minister's Pandas. Five of the six died at Naini Tal in October last year. It gave the Prime Minister great delight to visit them morning and evening, and they seemed to provide him with relaxation even when his mind was distraught with complex problems. Here we have an example of the tremendous pleasure we can get out of nature, however great or small we may be.

The Panda or Cat-bear is a very pretty animal; it is easily tamed, and makes a charming and lovable pet. It has a round bear-like head, erect pointed ears, a face like that of a cat, and short legs with the soles covered with hair. The face and chin is white, with a chestnut line running from near the eyes to the gape. The body is a bright chestnut, and it has a ringed tail about two thirds the length of the body. It is generally found above 5,000 feet. It requires a deal of attention and care in captivity, particularly because of its diet.

Bhimsa, Pema and their four cubs found an excellent home with the Prime Minister, and it is doubtful if they could have been cared for better. They were sent to Naini Tal in the summer, and they were fed on a very carefully selected diet. It was only because they happened to be such delicate animals, susceptible to climatic and other conditions away from their natural habitat, that they met with such a sad end.

Although it does not apply in this particular case, where it happened to be a family of animals, which received so much affection, care and attention, where it was justifiable to keep them together, we would like to suggest that Zoos coming into possession of rare animals may consider dispersing them.

This Society and its Members take this opportunity of conveying to the Prime Minister our deep sympathy for the loss of his rare and dear pets. We feel sure that the example he has set in his love for wildlife will have its reflection in our awareness, in the future, of our proud heritage of fauna, and that this will inspire us to preserve it.

EDITOR.



The Prime Minister with his beloved Pandas.



Cattle Egret in breeding plumage.

Our Less Known Species

THE CARACAL

Some years ago, I was standing waiting for the beaters to complete a jungle-fowl beat, on the Saharanpur side of the range, when a sandy-coloured wild-cat walked out. As the Forest Department had requested permit-holders to shoot all jackals and wild-cats as destroyers of jungle-fowl and pea-fowl, I shot it, but noticed that it had black tufts to its ears. I took it then for a lynx, which might be considered simply a species of wild-cat like the common 'Felis Chaus'. Some time later, a very experienced shikari, the late Mr. Fred Quarry, shot a similar animal under similar conditions without a qualm of conscience. I shot two more under similar circumstances in jungle-fowl beats, with number 6 or 7 cartridges, the animal coming out of the scrub jungle very quietly, at close range. The last one, being, I thought, a rather fine specimen, I had skinned. Then I read Dunbar Brandon's 'Wild animals of Central India' and realized that the animal was not a lynx, but a caracal. The lynx is found only in the Trans-Himalayan ranges, invariably about or above 10,000 ft. and has got a much thicker coat, of greyish-brown, not sandy-brown. According to Dunbar Brandon the caracal is essentially an animal of the semi-desert tracts of Rajasthan and Central India, where it finds a living by killing hares, sandgrouse, pigeons and chinkara. Being, like the cheetah, exceptionally fast, at least for fifty or a hundred yards, it used to be captured and trained in much the same way by the landowners, to course chinkara as the cheetah courses black-buck. It is almost unbelievable that they would slip a caracal onto a flock of pigeon in the open and it would kill one or two before they could take flight. Recently, the writer states—and he is writing not long after the turn of the century—the caracal has become extremely rare.

Yet here it was in scrub jungle on the fringes of the main forests and not by any means in semi-desert conditions, nor, to all appearances extremely rare. There is no doubt that, in this environment, it lives mainly on jungle and peafowl, and must to that extent be reckoned vermin; but as it is, apparently, a rare animal elsewhere ought we not to overlook its misdemeanours and give it some protection? I wonder whether any other readers of the "Cheetal" have seen it, either in the submontane tracts of the U.P., or in its more traditional home in the semi-desert.

It is, I repeat, apart from the black tufts on its ears, which are not always detected in time, very much like the common jungle-cat (*Felis Chaus*), and not much bigger than a large specimen of the latter 'Felis Chaus', which, however, generally has a noticeable amount of brindling on its back, while the caracal has only the faintest amount near the lighter-coloured belly.

R.L.H.

Annual Administration Report of Wild Life Preservation in Bombay State for 1957-58.

Review.

The Bombay State was the pioneer in introducing new legislation after the formation of the Indian Board of Wild Life in 1950, and its "Wild Animals and Wild Birds Protection Act of 1951" was rightly held up as a model to the other States in India. It is interesting, therefore, to review the working of the act several years after it was first introduced.

Unfortunately, for the year under report, no meeting of the State Wild Life Advisory Board could be held pending its reconstitution after the creation of the greater Bombay State, and so actual progress in certain matters was held up. For instance, steps to minimise the misuse of crop-protection guns could not be discussed. For analogous reasons, (i.e. necessity to await legal extension of the provisions of the Act to the newly added portions of the States) it was not possible to implement the revised game schedules. These include the important amendments of crocodiles and pigs being transferred to the "Big Game" schedule, thereby removing the stigma of the label of 'vermin'. On the other hand, it is good to see that the Bombay Govt. have notified certain amendments by which trophy and pet dealers are compelled to issue bills or cash memos to purchasers, and pet dealers are required to keep accounts of the sale of all kinds of wild birds, including vermin.

Wild Life preservation can only be successful if it stems from the people, and it is good to learn that during the year under report a meeting of sportsmen of the Bombay State was held, at which various important points were discussed and the difficulties of sportsmen considered. Similarly, the difficulties experienced by Honorary Game Wardens in enforcing the Bombay Act were heard by the Chief Wild Life Preservation Officer, and it was decided to increase the contacts between these honorary workers and the Government.

During 1957-58 there was an increase of 4630 arms license holders in the ex-Bombay State areas, and 29 in the old Saurashtra State area. It must be mentioned that under the Act a fee of Rs. 2/- per new licensee is levied for registration of his name and address, which sum goes towards the expenditure in implementing the Act.

The following statement shows the licenses issued during the year under report :—

Type of License	Ex-Bombay State	Old Saurashtra State
Small Game License ...	817 (985)	12 (2)
Big Game License ...	180 (163)	21 (26)
Special Big Game License ...	1	1
Pet Animals Possession License ...	2	—
Animal Trapping License ...	—	—
Pet Dealers License ...	6	—
Trophy Dealers License ...	10 (8)	—
Special License ...	9	2

In addition Special Licenses were issued for destruction of wild animals causing damage to human life or property, and certain mamlatdars were authorised to permit destruction of such animals. Under this scheme the following animals were killed in the combined State area :

Tigers	...	2
Panthers	...	14

In this connection, it is interesting to note that no wild dogs were shot during the year, probably because of the inadequate reward of Rs. 8/- per dog.

Ninety Shooting Permits for Shooting Blocks in vogue in Amraoti and Nagpur Circles, of the areas transferred from Madhya Pradesh, were issued during the year and the following year, and the following animals were shot in these blocks :

Tiger	9	Deer	9
Panther	7	Wild Pig	24 (—27)
Sambhar	14	Bear	1
Blue bull	5	Bison	2

Against this, the available statistics of animals shot in the State show that under Big Game Licenses 63 panthers, 14 tigers, 2 sloth bears and 1 bison were shot, while under Sec. 50 of the Act, which permits killing or capture of any wild animal or bird by the occupant of any land in bonafide defence of standing crop or cattle or in self-defence, 47 panthers, 2 tigers, 1 cheetal deer and 1 hyaena were killed. It is to be noted that all trophies of animals killed under Sec. 50 of the Act or under offence reports are Government Trophies, and are sold.

The following statement shows the position in the past three years as regards offences in the Ex-Bombay State :

	1955-56	1956-57	1957-58
Convicted	22	12	7
Not proved	5	3	8
Acquitted	8	2	7
In progress	26	4	9
Under investigation	7	—	1
	68	21	32

Of the 32 cases detected in 1957-58, 7 were convicted, 7 acquitted, 8 were dropped and 10 remained in progress at the end of the year. As regards game sanctuaries, in addition to the Gir Sanctuary of Saurashtra and the Taroba National Park of erstwhile Madhya Pradesh, proposals have been made for sanctuaries in Radhanagari, Dangs and Tansa catchment of East Thana division. A sum of Rs. 34,689/- was spent on existing sanctuaries.

The Bombay State has rightly placed the greatest emphasis on publicity and propaganda in wild life preservation, and it is encouraging to note that files of the Gir Sanctuary and Taroba National Park are under preparation. To make subordinate staff fully conversant with the provisions of the Bombay Wild Animals and Wild Birds Protection Act superior officers were instructed to explain the Act to them. The Director of Social Welfare, Bombay State has issued instructions for propaganda to be carried on amongst backward classes and scheduled tribes contacted on tour, and Divisional Forest Officers have to make special mention of such propaganda in their diaries. This is a very salutary procedure, if it is regularly done.

Special mention is to be made of the lions of the Gir. During the year, four lionesses were found dead, also a cub. Three lionesses were captured by the Junagadh Zoo staff, and one was illicitly shot. It is stated that "strict measures were adopted to curb the criminal tendency amongst the villagers of poisoning the lions, by spreading D.D.T. or rat poison on natural kills". It is also recorded that "195 visitors came to Sasan to see lions, and it is gratifying to note that none went back disappointed without seeing lions", and that a tree-top cabin was appreciated by visitors to watch *the fun* (the italics are ours).

—P. D. Stracey

Miscellaneous Notes

(Extract from Sport Fishing Institute Bulletin, Washington, D.C., U.S.A.)

INSECTICIDE STUDY

Conservationists everywhere should be encouraged by some recent progress listed in a recent MONTHLY ACTIVITIES REPORT by the Branch of Wildlife Research, U.S. Bureau of Sport Fisheries and Wildlife (Washington, D.C.). It was stated that a co-operative programme for long-range studies on effects of applications of granular insecticides has been initiated following discussions between representatives of the Bureau of Sport Fisheries and Wildlife, U.S. Public Health Service, Agricultural Research Service, Alabama Polytechnic Institute, Alabama Department of Conservation and Alabama Department of Agriculture.

Three or more areas of 10,000 acres each will be treated with granular heptachlor in accordance with different procedures employed in operations for eradication of the imported fire-ant. Pre-treatment studies will be carried out this fall and winter, and post-treatment observations are expected to begin in November, 1960.

These studies will augment work underway on a 2,300 acre cattle ranch in Montgomery Country, Alabama. Preliminary observations on this area have shown that bird populations declined 60 per cent within two weeks after treatment was completed on May 4.

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BIOLOGICAL BALANCE.

A note on possible use of manatees (sea-cows) for control of aquatic vegetation control caught our eye in the May FISH AND WILDLIFE REPORT of the U.S. Bureau of Sport Fisheries and Wildlife, Washington, D.C. It seems that the United Nations and the Indo-Pacific Fisheries Council are exploring the idea for control of troublesome aquatic vegetation in Ceylon and Thailand.

Manatees were once abundant in the Gulf Coast waters, especially Florida. Now we have few manatees, but large programmes of chemical weed control in these areas.

Another note elsewhere in the report comments on a fire-ant control investigation project in a southern State. May be the United Nations has the right approach—biological balance rather than deadly chemicals of far-reaching side effect. Perhaps the U.S. could invite the United Nations to explore the possibility of introducing ant-eaters into this country to solve the fire-ant nuisance!

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THE LION-SHOW OF GIR

"Advance intimation has to be sent to the Wild Life Preservation officer stationed at Sasan Gir. The fee charged is Rs. 150/- per party consisting of upto fifteen members each besides other charges for boarding, lodging and transport. There is a first-class forest rest house at Sasan with accommodation of twenty eight beds and electricity and water. A government station wagon is available on hire.

On the appointed day, early in the morning, shikaris are sent out to locate the animals, usually by means of pug marks. These shikaris are experts and they know the habits of the lions and their likely locations. They return to the camp by noon with varying information which they supply to the wild life officer, who then decides which side to take the visitors. A motor truck containing a buffalo kill, a goat and a few shikaris are sent immediately to that direction.

It may happen that the located lions are in the interior of thickets, away from the main roads, where it would be difficult for the visitors to go. The animals are, therefore, brought to the roadside to a suitable open space where vehicles can be parked. This is done by making the goat bleat by twisting its ear, so that the lions, which are especially attracted to goats, are attracted and move towards it. When the animals come sufficiently near, the shikari holding the goat recedes further and again makes the goat bleat so that the lions follow. In this way the lions to be shown to the visitors are enticed out to a suitable arena, where the buffalo bait is tied for those who want to see the lions feeding on it.

The visitors arrive at Sasan rest house at about 4 p.m. After tea they get information about the arrangements having been finalised and they are promptly taken to the spot by means of Government jeeps. When the lions are on the kill and it is about to get dark the vehicles are gradually taken nearer and nearer, finally being arranged in a semi-circle round the animals feeding on the kill. With the head-lights on or with search lights one can watch the animals for hours. It is not necessary to observe complete silence as is required with other animals, nor do the lights frighten the lions unduly, so long as the visitors do not make a noise or approach too near (less than about thirty feet). The lions, busy in feeding, pay no serious attention to the human beings around them provided no attempts are made to provoke them".

The above is a description of the famous 'lion show' of the Gir forest which has been developed by the forest department of Saurashtra (now Gujarat). We have referred to this in the last issue of the "Cheetal" and it has been unfavourably commented upon by persons in the press and objected to by the S.P.C.A. and the Humanitarian League. The habitat of the lion in the Gir, consisting as it does mostly of light thorn scrub inters-

persed with denser cover along nalas, would at first sight preclude the possibility of viewing the Indian lion in the normal manner as his African cousin. Yet, the bold demeanour of the lion when compared to that of the tiger, which moves and feeds at night, would indicate the possibility of normally seeing the lion by day provided (and this appears to be the crux of the matter), there is sufficient game in the area to attract the lion into the open. Not having visited the Gir forest, however, one hesitates to pass a final opinion. What we and others object to, is, the sadistic flavour of deliberately watching a lion kill a tied bait. There would appear, however, to be no alternative to the increasing custom in certain Indian sanctuaries, like the Gir Sanctuary and the Hailey National Park, of showing visitors our larger carnivora feeding on their prey, which of course should not be exposed to being killed 'in public' as it were. In this connection, the press note of March 18th, 1960, to the effect that the Bombay Government had decided to discontinue the practice of offering live buffaloes as bait to lions in the Gir forest, needs elucidation.

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REHABILITATION OF PROFESSIONAL SNARERS.

The above correspondence on one of the most thorny questions in India, i.e. the exploitation of the 'meat' animal or bird, is quoted in full, and without any reservation, for the benefit of our readers, and members of the Society.

Comments and suggestions are invited with a view to its solution.

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Thank you for your letter dated 29th July.

I am aware of it that meat of other game birds (not only partridge) also is served in one or two eating establishments in Madras city. I am also aware of it that live birds are offered for sale in places like Moore Market. But you will agree with me that it is next to impossible to establish that any game laws have been offended in the process. The plea could always be put forward that birds like partridge and quail are easily reared from egg by private individuals. You have mentioned to me previously the abortive correspondence you had with my predecessor on the subject. Could you yourself suggest what should be the line of action in the matter. In the last meeting of the State Wild Life Board I got the Board to agree to a suggestion that all wild animals killed should be presumed to be the property of the Government, mainly on the ground that they are scarcely ever raised privately. I doubt if this reasoning could be adopted in respect of these game birds. I would welcome any constructive suggestion on which action could be taken.

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My dear,

Thank you for a copy of the Chief Conservator's D.O. which reached me the day before yesterday.

I am afraid that the argument that partridges and quails are easily reared from eggs by private individuals and, therefore, there can be objections to any order (under, of course, relevant rule of some legislation) that these birds should not be served in the eating establishment in Madras city during the close seasons and without their being purchased from trappers licenced under such legislation, does not convince me.

Why does not Madras frame comprehensive legislation on the lines of the Bombay Wild Birds and Animals Protection Act under which trapping of these birds without licence and in close-seasons is prohibited? Unless, we are prepared to undertake such direct approaches to the thorny question of preservation of our wild life, we can get nowhere.

However, until such legislation can be enacted, I think a successful approach would be to amend the Forest Act to declare wild animals and their parts, wherever found, as "forest produce" after which the next step would be to see that your *Transit Rules* for forest produce, when taken from Reserved or Protected Forests or *Government lands*, enjoin the carrying of a pass or permit in support of the obtaining and movement of such forest produce in a legal way, while placing the onus of proof of legal possession of such forest produce on the person with whom it is found.

This is what has been done in Assam, i.e. game birds and animals and their parts are "forest produce" and, therefore, comes under the *Transit Rules* which enjoin the possession of a permit, certificate of origin or transit pass in support of its movement under the *Transit Rules*. I am aware, of course, that it may be argued that partridges and quails are not necessarily always obtained from Reserved and Protected Forests or Government lands in your State, but how much land to-day, which is not cultivated, is not government land? If the onus of this proof is placed on such people who deal in these birds, the trade will be severely hampered in my opinion. Of course, there must be some enforcement staff, and I wonder if this cannot be done by the Municipalities of your State.

I shall be very glad to receive comments from you, or from your Chief Conservator of Forests, on this proposition of mine.

With regards.

Yours Sincerely,
Sd/ P. D. Stracey.

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Subject : Wild Life—Partridges and quails sold at catering houses—protection of these species—suggestion made regarding.

Ref: Your letter dated 11-11-1959.

I have seen the D. O. letter addressed to Aslam. I offer the following comments on your suggestions :

(i) *Enactment of comprehensive legislation on the lines of Bombay Wild Birds and Animals Protection Act for the purpose in question.*

There are already Act and Rules under which the trapping of these birds without licences or in the close season, is prohibited. However in order to further the cause of Wild Life, a bill for the preservation of Wild Life in the State has been submitted to Government and this awaits their approval.

(ii) *To amend Forest Act, to declare as State property wild animals and their part wherever found.*

It was resolved at the Fourth Meeting of the State Wild Life Board, May 1959 that all Wild Life in the State should be declared as State property. In order that other States could also consider following this procedure, I have suggested this subject as an agenda item for discussion at the next session of the Indian Board of Wild Life. At present, I doubt if we can progress further on this.

(iii) *Enforcement of the Forest Act by the Municipalities of the State.*

The Forest Act has necessarily to be enforced by the staff of the Forest Department and it may be scarcely a practical proposition to seek the co-operation of Municipalities. May I recall the blunders we committed regarding Panchayat management of our forests. Apart from these protective measures I have issued instructions to the Forest Officers that the shooting cases should invariably be prosecuted. Such prosecution will definitely have a deterring effect on the offenders.

Yours Sincerely,

Chief Conservator of Forests, Madras.

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"Thank you for sending me a copy of your letter dated 11th November to the C.C.F., Madras, regarding selling of game birds in Madras hotels during the close season, which I have read with interest. Partridges and quails are never raised from eggs in India, and I wonder where such an idea originated.

Game birds, antelope, gazelle and also cheetal are caught by a wandering tribe of professional snarers and trappers known in the Deccan as Passapadis, and in Mysore State as Hakki Pikki Avari. I don't know what it is in the Madras Presidency.

The Mysore Government (Wild Life Department) are trying to settle these people to agriculture. Government allotted Rs. 62,000/- for 50 families who were given 5 acres of land each, 50 houses were built for them with two wells and a pair of bullocks each in the Hunsur Taluk some 30 miles west of Mysore city. Nevertheless, with all this encouragement, when I inspected the Colony last month at the request of the Wild Life Board I found that most of them had reverted to their traditional mode of life, having wandered off again snaring and trapping. I have accordingly sent in a report to this effect. Given time and little pressure from Government they should settle on the land, and in a generation or two abandon their wanderings.

Now the Madras Government could also do the same. But first they should have a census taken of all the tribes in their areas, confiscate their nets when land has been given to them (which the Mysore Government omitted to do), and the scheme should be put under a responsible officer".

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RINGED BIRDS

From :

The Development Commissioner,
Uttar Pradesh.

To,

1. All Commissioners, U.P.
2. All Deputy Inspectors General of Police, U.P.

No. 406/P.II-TT-103/56, Dated Lucknow, January 18th, 1960.

Sir,

I have the honour to say that many Wild Life Societies in advanced countries are putting numbered rings on the legs of migratory birds to collect data regarding their migration places, routes etc. Practically all migratory ducks, wintering in India, go north to their breeding places, which extend throughout Siberia and Russia right up to the Arctic Circle. Russian Scientists ring the birds in their summer nesting places. Whenever any rings are found by any person on the legs of ducks shot or caught in India the rings, with the exact details of longitude, latitude, district, State, date and year, where found, should be returned to the Hony. Secy. Bombay Natural History Society, 114, Apollo Road, Bombay—1.

Recently such rings have been recovered in the State of U.P. Ignorant Shikaries who recovered such rings may not always know what to do with them. It will be helpful to the Bombay Natural History Society if all licence holders are, when they come to District Headquarters for the renewal of their licences, advised of the action they should take in the event of their recovering such rings.

Yours faithfully,

Sd/ A. D. Mukerji,

Dy. Development Commissioner (Tourism),
For Development Commissioner, U.P.



SUNRISE IN THE JUNGLE.

Have you stood on a hill in the jungle
Facing east in the light of the dawn,
Have you watched the sun rising in the glory
'Mid the wonderful hues that were born?
The purple, the blue and the crimson,
The orange, the green and gold
Show in bands, and in streaks, and in splashes,
Like a beautiful painting unrolled.

You will notice the mist in the valley,
And the smoke from the village below,
You will hear the faint clangour of cowbells,
While around you the jungle cocks crow.
Then a chorus of melody rises,
As the birds say 'hello' to the sun,
And a peacock screams out in the distance
Proclaiming that day has begun.

C. H. COUTTS.

“It Happened in India AND How They Do It Elsewhere”

IT HAPPENED IN INDIA

“Poachers Leave Behind Spoils”

(Extract from the Statesmen 30-8-59)

Bokakhat, August 29th, 1959

“On August 26th last, the Range Officer of the Kaziranga Wild Life Sanctuary with his staff and two elephants went on patrol along the bank of the Mara Shansri river. After a while, he heard the sound of gun shots nearby. The Range Officer followed them and detected some poachers, who were about to load two killed deer on a tusker's back. On their approach, the culprits fled leaving their spoils behind.

The elephant was impounded at the Bokakhat pound and, the two killed deer were sold by auction at Bokakhat. Some persons have been arrested in this connection”.

* * *

“Quick Work”

In the famous Bandipur Sanctuary of Mysore three subordinates of the police department were caught red-handed in December 1959 with a Cheetal deer which they had shot. They had come in a motor-vehicle from across the border with Madras, probably from Gudalur which is the other side of the Mudumalai Sanctuary. Hearing the shots being fired the D.F.O. and the Conservator who were in the Bandipur Forest Lodge at the time, organised a chase. Anticipating that the culprit could go back only by the main road from Bandipur to Gudalur, they sent a lorry ahead with some game staff, who actually detected the poachers loading the dead deer into a motor vehicle.

The culprits begged to be allowed to compound the case on payment of any sum even Rs. 1000/-, but the Conservator refused and sent the case to court.

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"Fortyone Poachers Punished"

(From Frontier Mail, Dehra Dun 28-4-60)

Fortyone offenders of illicit hunting and shooting in the Government Forests of Southern Circle, Uttar Pradesh, were caught by the Wild Life Preservation staff during the month of March, 1960. A total compensation of Rs. 1,225/- was realised from these poachers by the Wild Life Warden.

"A Parliamentarian's Crime"

No less a person than a Parliamentary Secretary was detected having shot four female Cheetal deer in the Dholkhand Sanctuary of the Saharanpur Division, Dehra Dun during the cold weather of 1959-60, we understand.

His party were caught, with the deer and a jeep, by the local Game Warden, a Deputy Ranger, who was brave enough to challenge the distinguished visitor and to secure a recorded admission of the crime. It is to be hoped that the case will take the normal course, and that a conviction will result.

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"Expensive Shooting"

In the Jubbal forests, of Himachal Pradesh, some men and their dogs were involved in the illegal killing of a sambhar. As the result of the determination of the young Assistant Conservator in charge of the case the men were 'fined' a total sum of Rs. 470/- which included the compounding fees, license fee and royalty.

In the same area a contractor's employee shot chakor with another person's gun and was 'fined' a sum of Rs. 70/-, which included the compounding fee and the royalty.

HOW THEY DO IT ELSEWHERE**Conservation in the United States of America**

In the U.S.A. there are the following private conservation groups :

78 National
20 Regional
236 State.

One would have thought that there was no room for any more, but recently the Conservation Education Association, has been formed with 400 members in the U.S.A. and Canada. The "only organised group in the world devoted exclusively to education for the conservation of natural resources". The group serves as a common meeting ground for their primary interest—more and better teaching of the wise use of natural resources in schools and colleges—and was formed in 1953, from among the members of the National Committee on Policies in Conservation Education. There are 30 charter members.

During the fiscal year 1957-58 the average expenditure of wild life work of 54 agencies was \$ 2,646,445.

(Ed: Compared with this, and even making allowance for the great differences, the record of India in the matter of wild life conservation is pitifully small. The trouble is the extremely low priority being given to the problem at present. While song and dance academies, art societies and the like are being subsidised, what is being done for wild life? The challenge is there, what do we propose to do about it)

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Pakistan Appoints First Game Commissioner

(Extract from Conservation News, National Wild Life Federation, Washington, D.C., U.S.A.)

Brigadier Ismail Khan has been appointed Game Commissioner for the Government of Pakistan, according to a report from the Embassy in Washington, D.C. The first man to serve his country in this capacity, Brigadier Khan plans to develop a comprehensive conservation programme to restore and protect valuable resources of the nation. Re-awakened interest in game management in Pakistan began several years ago through co-operative efforts of Maj. Gen. Hayaud Din, then military and naval attache in Washington and the National Wild Life Federation. Since 1955, efforts of the National Wild Life Federation conducted through the Educational Servicing Division has resulted in broadening conservation concepts and extending conservation education programmes in a number of countries, particularly in the far east where dense human populations, shortages of food and housing and absence of protective game laws complicate wild life conservation work. The Federation also is an active member of the International Union for Conservation.

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Chilas

The 'red lechwe', a beautiful aquatic antelope which inhabits the plains of Northern Rhodesia, which are periodically flooded by rivers, are subjected to decimation by tribal

hunts known as 'Chilas'. These are officially permitted, the hunting covering a period of two to three days. The large herds are surrounded by spearmen and dogs and driven from side to side until exhausted when they break up into small groups. Then the real killing commences. The majority of animals killed are pregnant and young females. In one 'Chila', as many as 1,967 were killed, in another 1,993. About half killed were females. In 1932 the population of the 'red lechwe' was estimated at 250,000 on Kafue Flats. In 1958, their numbers have shrunk to 30,000.

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Bravely Spoken

(Evidence before the U.S. Senate Committee on the Wilderness Bill).

Mr. Van Allen. "Thank you, Sir. My name is William A. Van Allen of Los Angeles. I do not represent a single side of beef, boardfoot of lumber, piece of ore, or any organisation known to this committee. I feel that I am entitled to be heard, however, representing as I do one of the most important groups in the United States. Testimony from this group, or like ones, is notable by its absence in the printed hearings on S. 1176 and S. 4028. The group I refer to is *my family*. It has grown slowly to a membership of six: its four junior members range in age from 10 to 9 months. Such organizations are common in this country, perhaps so common and commonplace they are ignored.

It may be worthwhile to enumerate some of the principal characteristics of my organisation other than those mentioned already :

1. It has its headquarters in a large urban center.
2. It is crowded—to some extent at home, at school, on the streets, in parking lots—by too many activities and by the intense pressures of making a living.
3. It faces difficult financial problems, particularly at the first of every month.
4. It needs inexpensive recreation in which all of its membership can participate. Meeting this requirement, it enjoys camping and hiking. These are both cheap and something in which all can take part whether as a weekend pursuit or for longer periods. I won't go into high sounding prose about the needs of the soul, body, and mind, for the stretching and the expanding they cannot have in every day existence, but can have in wilderness."

Letters to the Editor

Dear Sir,

In the Times Special Number of 19th July, 1960 on the Royal Society Tercentenary is a special contribution by Professor C.F.A. Pantin, F.R.S., of Cambridge University, "Future of Field Zoology".

I submit below for favour of consideration, by the Editors, and publication in the Society's journal a copy of the last paragraph of Professor Pantin's article. I have his permission to make use of it.

"But the greatest tasks that face the Zoologist concern animals and man in nature; the control of food supplies, insect pests or disease. Production of an insecticide is easy. Prediction of its indiscriminate use is exceedingly difficult. We try to control nature, and by a curious paradox we change the natural world more rapidly and unpredictably than ever before. Here are the most difficult problems that face our own future".

Yours faithfully,
Lt Col. R. M. Burton

London, 6th August, 1960.

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"True Extract"

Dear.....,

"Regarding our game association, the threatened extinction has been forestalled by timely intervention by the Chief Minister, whom we approached. He thinks that the game association composed of independent sportsmen is a necessity for checking up on poachers, including *departmental* ones also. So we exist".

Yours Sincerely,
(Interested)

Siliguri—1st December, 1959.

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"True Extract"

Dear Sir,

"I recently camped in a shooting block adjoining that occupied by the party of a figure prominent in *wild life preservation circles*. To my amazement I found that members of this party were indulging in spotlight shooting. A cheetal hind was the victim of these "sportsmen".

Yours etc.,
(Wild Life).

Hazari Bagh—9th January, 1960.

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Dear.....,

1.....,

2. There were 2 shots in the Kanha National Park on my first morning there. I gathered that a dozen or more people were out after deer, that they hit and wounded a Sambhur (the second shot was a follow up after wounding) and that one offender was caught and induced to give the names of others. It is quite beyond my understanding why Government hasn't yet seen fit to appoint a full time gazetted officer in charge of the Park. How can a busy forest officer possibly give the work sufficient of his time. I expect you know the "Sanctuary" at Dandely—a sanctuary in name only nowadays, with thousands of bamboo cutters, managanese miners and roaring motor lorries; also the filthy effluent from the pulp mill running into the river which is the principal source of water, not only for the game, but for many villages and their domestic animals as well I was told.

With best wishes.

Yours Sincerely,
J. D. Chapman.

UNESCO, New Delhi—2nd December, 1959.

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Dear Sir,

During the month of July '60, hundreds of pounds of fish (Mahseer) were found lying dead at the Head Works of the Jumna Canal, Katapathar.

Medical opinion, it is said, blame these fish as the cause of more than 30 cholera deaths and state that no fish from this area should be eaten.

This is, of course, in my humble opinion wrong, as fish always eat dead bodies, and never get infected. Unless the eggs of the fish is consumed there is no danger.

A point of interest to fishermen is that the largest Mahseer picked up from among the dead fish was 160 lbs. Other fish ranged from 30 to 80 lbs. The record Mahseer caught on rod and line was caught in the Cauvery and weighed 123 lbs. These fish, in my opinion, have been bombed by villagers at the junction of the Jumna and Aglar rivers and have floated down to Katapathar, picked up and sold in a decomposed condition. I think that Brother fishermen will agree that our mighty Mahseer must not be blamed for these cholera deaths.

A. Fisherman.

Dehra Dun—16th August, 1960.

(Copy of D. O. letter No. 638 dated the 27th May, 1959, from Shri H. L. Tandan, B.Sc. (Hons) Pb., Deputy Warden of Fisheries, Himachal Pradesh to Mr. Holdsworth, The Doon School, Dehra Dun).

Dear Mr. Holdsworth,

I am writing to you after a pretty long time. I hope my letter finds you in the best of health.

I was astonished to read your article on "*Mahseer Fishing in the North of India*" which appeared in April, 1959 issue of "The Cheetal", in which you have stated that Himachal Pradesh Government wanted to convert the upper reaches of Giri into a trout stream and had sanctioned the clearing of the mahseer out of the river by every method, including explosives.

I must take this opportunity to contradict your apprehensions, as at no stage has the Himachal Pradesh Administration ever sanctioned or even conceived such a fantastic scheme. Giri is primarily a stream for mahseer where trout can never flourish. On the contrary, the Himachal Pradesh Administration is very keen to preserve the mahseer fishing of Giri and Ashni, known to many an angler in India and abroad.

With this object in view, the Himachal Pradesh Administration has prepared draft rules for regulation of mahseer fishing in certain portions of Giri and Ashni (Mahseer Angling Reserves). These draft rules permit fishing in the mahseer angling reserves of Giri and Ashni with rod and line only and no netting is permitted. These rules have not yet been finally notified as the Punjab Government (successors of the PEPSU Government) have not yet communicated their approval to these rules which will equally apply to the portions of Giri and Ashni flowing through their territory and forming common boundary with Himachal Pradesh. I am, however, sending you a copy of the aforesaid draft rules for your information.

With best of wishes and kindest regards.

Yours Sincerely,
H. L. Tandan,
Dy. Warden of Fisheries,
Himachal Pradesh.

* * *
Dear Editor,

I was interested in Mr. Mitchell's comparison between jungle-fowl shooting in Assam and the Dooars and the Dun, in No. 2 of Volume 1.

My own experience of jungle-fowl shooting in East India is limited to, literally, a flying visit to Assam and Tripura. I noticed the same thing as Mr. Mitchell—the comparatively small size of the Western jungle-fowl. The Eastern bird is at least a pound heavier

than the Western. I shot once in December in the Seeonee range of M.P., and expected to find the jungle-fowl the 'grey', but they were the 'red' and exactly the same as the Eastern bird, heavier and darker than the fowl of Dehra Dun and at least as far East as the Western boundary of Nepal. I was so interested that I wrote to the 'fons et virgo' of ornithological information—Mr. Salim Ali. He confirmed my suspicion that the Eastern and Seeonee bird is a definite sub-species.

So there we are. There is no need to suggest that the birds we shoot in the Dun are immature. Of course it will always happen that in an October or November shoot a few immature birds are shot: or a cock bird that has been hatched in May or June will, by October, be difficult to distinguish—in flight—from a hen, though capable of as strong flight as a two or three year old cock. The latter, in fact, are slower in flight, for the first two years at any rate, but they are a deal more cunning.

Our impression of jungle-fowl shooting in Assam and Tripura was rather unfavourable. The local people seemed to have no idea of scientific beating. In Tripura the successful were those who stalked the jungle fowl as they were feeding and shot them on the ground. Hence the demand for No. 4 cartridges, while we in Dehra Dun shoot them with Nos. 6, 7, & 8. But we shoot them in the air. Possibly we are maligning Assam shooting. We admit that our shooting is mainly in jungle, and scrub jungle, but we get some very sporting shots. There may be places in the East where birds can be flushed across large stretches of open 'paddy', but I never saw them. An average of four to six birds in a day per eight guns is not so bad, since, with so many guns, there must be some who are not very expert.

The ideal number of guns is four, and, if they all shoot fairly straight, they should be able to average ten per gun. But it all depends on the birds being there. You can go to an acknowledged good place, and you may be disappointed.

Yours sincerely,

R. L. H.

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Sub : Wild Life Pledge.

Sir,

The official version of the pledge for the preservation of India's Wild Life reads as follows :

"Born and brought up in the land of Lord Budha and Mahatma Gandhi, I give my solemn pledge to protect my country's forests and their voiceless denizens from wanton and wasteful destruction."

2. Evidently, the wordings of the pledge leave much to be desired. They impose a limitation which in a welfare scheme is unnecessary. Only those born and brought up in India can rightly take up the pledge. Many Indians born and or else brought up outside India as also many foreigners who have settled down in India cannot partake of the pledge without committing a factual inexactitude. Should the pledge not be so worded as to enlarge its scope and make no distinctions among those who prefer to solemnise it irrespective of birth or bringing up?

3. Then again, the mention of Lord Budha and Mahatma Gandhi in the pledge tends to unduly exaggerate the significance of the pledge. The two paragons were apostles of total non-violence. The Wild Life Preservation movement does not advocate total non-violence. It admits of killing, though such rational killing as may be in consonance with the current game laws and without the element of destructiveness. Also the widespread killing of certain vermin creatures is sanctioned by law and is looked upon as a noble public service.

4. In my opinion the pledge should be lent a more realistic and logical character. The text of the pledge needs reconstruction to avoid the above anomalies. I suggest the following text though I am sure it could be worded even better.

"I hereby solemnly pledge to protect from wanton and wasteful destruction my national forests and their voiceless denizens."

Yours faithfully,
A Forester.

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Dear Editor,

Having used the gun and rifle extensively and also having taken a keen interest in natural history, I have combined with shooting a study of the denizens of India's vast jungles.

The time I feel has now come, as everyone of us no doubt also feels, when measures to preserve the wild animal wealth of the country should be taken up seriously, owing to the depletion of the beautiful species of deer and antelope, which once roamed the forests and plains of India in vast numbers, and afforded good sport, and also a sight pleasant and interesting.

To create sanctuary after sanctuary, which one would assume would give protection to vanishing species of wild animals, to me seems encouraging the poacher. It also means extra trouble, burden and expense to the forest department and staff, whereas the poacher

not finding animals to shoot in forest blocks open to shooting, would naturally creep into sanctuaries to meet his ends.

- (1) I would suggest that certain good forest areas should be declared sanctuaries, and others split up into shooting blocks. Permits for these shooting blocks should only be issued on a very restricted basis, that is to say that if a sporting licence is issued for a certain shooting block, that particular shooting block should hereafter be closed to shooting till the next year or least for the next six months.
- (2) No sportsman should be allowed to include any kind of large shot including No. 1 shot in his ammunition when entering a shooting block.
- (3) Shooting permits should only be issued to sportsmen who know how to use a rifle.
- (4) No shot gun should be allowed to be taken by sportsmen into shooting blocks during the closed season for feathered game.

These measures, I feel, would to a great extent reduce the chances of leaving wounded animals to die a lingering and painful death. The issue of firearm licences on a liberal scale has also been the cause, to a great extent, of poaching, but this can always be countered if strict measures and rules are framed for the issue of shooting licences.

I am placing these few suggestions for the consideration of those who are interested in saving our wild animals now on the verge of extinction, and also for those who wish to enjoy a few days shooting in the jungle in the true sense of sportsmanship.

It would be very interesting to know the opinions and reactions to my suggestions, and criticism, if healthy, would go a long way to help us in our efforts.

Yours Sincerely,
Mohammad Iftikhar Ali Khan,
Nawab of Malerkotla.

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"Wild Life Conservation"

Sir,

I have read with interest your review on the annual Progress Report of the Wild Life Preservation Department of Himachal Pradesh for the year 1958-59 published in the April issue of the "Cheetal". In an earlier issue, a similar review on the working of the organisation in the Punjab had appeared, and you would be doing a very useful service if you continue your efforts to secure such reports from other States and place them before your readers.

In spite of the commendable activities of the official organisations in the two States mentioned above, the annual statements of offences against wild life given in these reviews presents a rather depressing picture. In Himachal Pradesh out of 175 cases reported during the year, 105 were compounded (against what amount of money, it has not been stated), and 5 decided in courts ending in acquittal in 1 and conviction in 4, with a fine of Rs. 86/- in all. This means that on an average the amount of fine inflicted on an offender in the few cases which succeed is Rs. 21.50, and this in the present times of inflation when the value of the rupee is not what it used to be. Figures for the Punjab in this respect were not happier—the average fine imposed by courts there came to about Rs. 10/- or 12/-.

Presumably the wild life laws in Himachal Pradesh are the same as in the Punjab and provides for a maximum penalty of Rs. 50/- for the first offence.

Criminal courts in practice generally maintain a good margin in penalties imposed in ordinary cases with reference to the maximum authorised by law. In order, therefore, to secure a higher average, the need to raise the statutory maximum of penalty for offences against wild life is essential—there is even a case for fixing a minimum penalty. In America, where official effort at wild life preservation is of the highest order minimum penalties for specified violations of the relevant law are in force, viz so many dollars for every pheasant shot beyond the prescribed limit, and so on.

Various arguments and explanations are generally given for the prevailing apathy in the States towards stricter control on shooting of game, and more effective enforcement on and severe penalties against evasions of the law. In the first place it is argued that we must concentrate on education of the public rather than on punishment. Secondly, it is said that the idea of conservation of game does not go hand in hand with a growing population and pressure on agricultural land and its development. It is cited in this context that with the advance in agriculture in America, game had been almost exterminated by indiscriminate killing, before people took to preservation seriously. Thirdly, it is claimed that official time and attention in India today is pre-occupied with much more important developmental work etc. etc.

Obviously, education on the benefits of nature cannot be made a substitute for punishment. We have been preaching for centuries against murder (and theft) for instance, but proper punishment of the guilty has also been going on side by side, and even the abolition of the capital sentence has not yet come. Then, rather than complacently accept the arguments that near-extirpation is a necessary stage in the evolution of a 'preservation consciousness', we should rather learn a lesson from the example of America and do all that we can to hold back threatened extinction. The excuse of 'want of time' etc. by official

quarters cannot really hold good with separate departments and budget allotments in existence in most of the States. In case, however, any overhaul in the official organisation is due anywhere it should be taken up straightaway. We cannot afford a laissez-faire approach in these matters.

One suggestion for effecting improvement in the existing state of affairs is to pass on the control of wild life preservation in States to statutory Game and Fisheries Commissions, composed of interested and qualified non-officials having special interest in or knowledge of wild life, and officials to assist and advise the administrative machinery in matters of policy and working details.

It is clear that the existing laws, as well as administrative organisation in most States of India require drastic change in basic essentials before better results can be expected in wild life conservation.

Chandigarh—2-6-1960.

Yours Etc. Etc.

Balbir Singh.

* * *
Dear Editor,

I thank you for publishing my article on the preservation of the Fauna-Flora of the U.P.

I appreciate your objection to my suggestions No. 6 and 9 and I am sorry that I did not give reasons, which are given below :

1. *Rule No. 6.* I meant total prohibition of shooting by beating as well as shooting from any conveyance including motor, elephant, bus, tractor or carts etc. for the reason that in a conveyance the game allows much easier approach than by stalking. Hence it facilitates far greater destruction, and provides no sport at all.

You cannot enforce effectively the number of animals to be shot by sportsmen since the Beat-Guards concerned are purchased and never report. The correct number of animals actually shot for the handsome bakhshish they get in addition to good smokes, drink, meat and birds, whenever they want, even to dry and send home.

There being no restrictions on birds, it was usual to have a bird drive a day before the departure of the shooting party. With less than 2 dozen beaters and 4 guns it is not difficult to shoot 50 to 100 and even more jungle fowls, peafowls and pheasants in the submontane tracts; and ducks and partridges in the plains, in addition. This also should be prohibited.

In proof of my statement if the Game Wardens or forest-staff of at least Ranger and higher ranks check the departing sportsmen's parties, I am confident that it will reveal the extent of the misuse of shooting rules as compared with the reports of the Forest Guards.

It must also be noted that in every bird *haka* at least 25% birds go wounded to die useless and painful deaths.

2. *As regards rule 9.* Whether you fix sizes of horns of animals or not, an overzealous and starving shikari, or one of his party, may fire on first sight, and if they happen to shoot an undersized animal the first impulse generally is to hide the crime and leave it in the forest—or dry the skin in the forest, and take some meat if eatable, and take the Forest Guard into confidence, instead of paying compensation or earning a bad name. In this manner actually more than the prescribed number of animals are shot. If the restriction of sizes are removed, many a self respecting sportsman will not stoop to the above tactics, will regret the mistake; go away with a smaller trophy, and be more careful in future.

I left Lansdowne for Jhansi in 1940. On my return in 1958 I found that there was hardly ten per cent of the birds and animals which used to be there before. I had evidence of this when I drove from Kathgodam to Hardwar and back. There used to be hundreds of cheetals, swamp deer and dozens of sambhar, kakars, pigs, hog deer every morning and evening in all the burnt grassy areas, and much more in South Patlidum, known as Corbett National Park. Most of these areas are empty now, and the biggest herds are in dozens only, instead of in hundreds. They have all been slaughtered by poachers as a profession and trade in meat and fish since these items have become so expensive. Licences are also issued too lavishly for fire arms, 50% of which are used in poaching and at least 10% in dacoities and murders.

Yours faithfully,
M. Hakumuddin.

5th May, 1960.

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Dear Editor,

I had shot in a number of Divisions of the U. P. four years ago. The almost deserted forests, and the amount of poaching I saw made me feel that strict control, and some effective measures to put a stop to the nefarious activities of poachers was indicated. On my return to this State, after four years, it gave me great pleasure to read Mr. H. B. Johri's article in the April 1960 issue of the "Cheetal", from which I see that a serious effort is being made in this State to control poaching by the Wild Life Preservation Organisation, Uttar Pradesh. I however disagree with Shri Johri when he says that there is a marked decline in poaching, and I feel that this Organisation must seek the advice of Sportsmen and revise their methods on the advice given by Sportsmen.

There has never been so much poaching in the past in Dehra Dun Division as there was in the season 1959-60. The reason for this increased poaching is because, the mechanised poacher no longer being free to operate along the forest roads, moves off the road on foot at night, complete with his lighting equipment, and in a bigger party, with more weapons for safety: The old Jeep poacher is therefore able to do more damage than before. The Jeep poacher, as you will understand from his methods, was mainly out to replenish his larder—this he now makes sure of doing by, in addition to going out himself, appointing a shikari to sit over a water hole or near a 'Baharrh' tree with a weapon loaned to him. Even when 'Meat Hunting' parties are not out they provide weapons to the villagers to keep them constantly supplied: This has resulted in more poaching from the villages.

When I shot in the U.P. four years ago, I had never seen a poacher on foot in my block, nor did I hear many shots at night. This season I was allotted four blocks, and in every block I saw numerous poachers on foot, and heard many shots at night.

I was last allotted a block in the Dehra Dun Division. I came across the fresh pug marks of a tiger and I was tracking him, having given up the stereotyped method of tying katras, when I came across a man on foot with a gun. As there was a curve in the road I nearly collided with the poacher; I had no time to take cover, for when I rounded the bend we were in full view of each other, the intervening distance being only fifty yards. I roared out to him to halt, but he retreated into the jungle. It was May, and a foot deep carpet of sal leaves lay on the ground, yet this poacher moved with the stealth of a cat. I gave chase but when it dawned on me that his movements had been so quick and silent, and that I had a more profitable stalk ahead, I gave up the unequal contest with man. I later told one of the locals that I would have congratulated him on his expert movement. Later, my shikari when looking for tiger pugs, on two different occasions saw and spoke to shikar parties fully equipped with all night shooting devices. On another occasion during this shoot, while I was reconnoitering a place where I intended to sit up, I surprised a poacher who was already sitting in the locality, and who fled in full view of my shikari without paying any heed to his calls. Throughout my fifteen day stay in camp I regularly heard at least three shots every night. I sat up in a machan on my last evening, when at about 7.15 I heard some one tramping through the jungle; thinking that it was my Shikari, who I had instructed to take me down off the machan I waited, when to my surprise I saw six well dressed people, all armed, and carrying battery boxes and lights. At my challenge to stop or receive a bullet, they fled into the jungle, having appreciated that I would abide by the law as regards shooting at them, and that I was unable to come down off the tree by myself. Judging from my experiences this season, and from what I say of the past, it can hardly be said that 'there is a marked decline in poaching'.

I employ helpers in my camp from the local villages: All these men have told me that they are provided with arms and asked to produce meat, and I was even told this in my last camp in May. Lastly, a gentleman visited me in my last camp and told my camp helper that as I had not been able to provide any meat, and as I would be leaving the block, he had better get ready to do the needful.

Poaching along the main forest roads in Jeeps, admittedly, has stopped, but these same people are now using jungle tracks in bigger parties with more weapons, and also supplying weapons to the local villagers to provide them with a regular supply of meat. To remedy this, it is suggested that patrols be less tied to their vehicles, and less tied to the main forest roads. Game Guards must be made to reside in the main villages adjoining shooting blocks, so that they can get acquainted with places in the jungle where shikaries usually sit up, and also get to know the regular poachers from the surrounding villages. The following are the suggested locations for the posting of Game Guards within the Dehra Dun Division, and they should be rotated every six months to other groups of villages within their own Range :—

Timli Range	...	Sahaspur Village.
Assarori Range	...	Phandowalla F.C.
Lachiwalla Range	...	Dhulani F.C. or Doiwalla P.S., NOT Lachiwalla.
Thano Range	...	Joli F.C.
Barkot Range	...	Ranipokhri P.S. or Barkot F.C.
Motichur Range	...	May be left out till more Guards are available, or be in the list of rotation for all Guards of the Division in turn.

The Warden or Assistant Warden, when patrolling a particular Block, should first contact the resident Game Guard and take him on the patrol to the places where locals are likely to sit up. Ambushes on the lines of approach to such 'sitting up' places would produce results as the locals operate mostly during the hours of daylight. Local poachers from the villages far outnumber the poacher from the city.

Yours Sincerely,
"Veteran Sportsman."

Wild Life in Madhya Pradesh

Wild Life Week is celebrated all over India, but Government does not take any steps to implement the measures which are suggested during this week. Only five per cent of the animals that were in Betul District remain, while in most of Madhya Pradesh and other areas there is not even as much as that. Being a sportsman I have a love for wild life, and I have been putting forward many proposals for the protection and preservation of the beauty of our jungles, and the wealth of our Country, but all of them fall on deaf ears.

There are thousands of crop protection licenses in Betul District and in other Districts of Madhya Pradesh. The holders of such licenses are the main destroyers of game. They surround water holds and kill poor thirsty animals. There is a water scarcity in the whole of Madhya Pradesh, and in some areas water is not found for miles together. This deplorable state of affairs is being seen for the last ten years, and this has been the finish of our animals. I have approached the Government many times to reduce crop-protection licenses, or according to the old rules to arrange for such guns to be deposited from 1st March each year when the crops have been harvested, to be returned again in July. They did so in '58-'59 but again discontinued, and the poor animals were again at the mercy of these, so called, crop-protectionists.

Such poachers are very bold and fearless, they enter reserved forests, also sanctuaries, and kill whatever they like. Some low grade Government servants allow, assist, and even ask local shikaries to get them meat and skins. These shikaries sit on a kill near the water in groups, and fire even at a tiger. Madhya Pradesh was famous for tigers, and where 6 to 7 tigers used to appear in a beat before, now one very rarely sees a tiger at all in a beat. The latest idea is putting rat poison in a tiger kill: This is the main reason for the great depletion of tigers in the forests of Madhya Pradesh. I have reported about it to the authorities concerned, but no action has so far been taken. The poison is being sold openly in the bazar without any license.

There is a famous shikar place, Kantawadi in Bhanwargarh Range of Betul Division, where a better sanctuary than Kanha Kechli could be made. There are Sambhar, Cheetal and Barasingha in Kanha Kechli, but tigers are very few because of the type of jungle, and its unsuitability to hold them. On the other hand, Kantawadi has good jungle to hold tigers. Kantawadi is also good from the scenic and photographic point of view. Besides, wild animals, fish and crocodiles etc. could be easily kept as there are deep waters in the

Machana river. The Collector of Betul agreed several times to make it a sanctuary. He wrote to the Government, but nothing has been done as yet.

Unless some action is taken on the following suggestions, wild life in Madhya Pradesh is doomed to destruction :

- (a) Deposit of crop protection guns on 1st March every year.
- (b) Prohibition on rat poison being sold in the bazar in large quantities.

I also think that Kantawadi may be made into a "Sanctuary"

Jamshed Butt.

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"Some Sorry Notes on Wild Life in NW. Madhya Pradesh"

(*Re-printed from the Journal of the Bombay Natural History Society of August 1959. By kind courtesy of the Editor and the Author*).

In mid-December 1958, I was invited to a week's shoot in one of the old Rajputana States (now in northern Madhya Pradesh) and, as I had not been into that country before, I gladly accepted.

Before, in, and after we moved into camp we met the Sub-Divisional Officer, the Collector of the District, and the District Superintendent of Police, and in the course of our several conversations were jointly and generally informed that shooting from cars and jeeps was permissible and in fact the only manner in which shikar was practised. Our protest against this form of 'sport' was politely turned aside as impracticable and idealistic. More than one official claimed to have recently shot the Great Indian Bustard.

Our camp was outside a village surrounded by cultivation, and a mile away was a shallow ravine 50 to 200 yards wide and covered with thorny scrub interspersed with the dhak (*Butea monosperma*). This was said to hold tiger, and with the assistance of our host, the local landlord, three beats were arranged, one necessitating the employment of almost a hundred beaters. There were several tigers in the 5-mile length of the ravine but the beats were all made in an amateurish and haphazard manner and the animals never showed themselves. Chital were twice said to have broken back but I did not see any animals at all. Beats were arranged in forested areas further away with similar results, though chital, sambar, and nilgai were seen. The beaters always included several persons armed with muzzle-loading guns. The Indian Arms Act has recently come into operation in this area and some of these guns were not yet covered by any form of licence.

All tigers are termed cattle-lifters or man-eaters and receive no protection at all, and Government officers travelling in the districts carried loaded weapons and shot at all they saw, both by day and night.

In this area, the slaughter of cattle is prohibited and there were fewer goats and sheep than in any other place in India that I could remember. The shortage of meat was acute and formed a problem to which I had not had my attention so forcibly drawn before. Our host was a Jain landlord, and the food which he very kindly sent to camp was entirely vegetarian. The few partridge which we shot were not enough to prevent everybody from becoming meat-hungry.

Attached to our camp was an enthusiastic shikari who had done a fair amount of poaching when the shooting was controlled by the Ruler of the State, and he now shot deer and antelope at night whenever a jeep or other suitable conveyance was available.

On the first night we drove out in a jeep for about 10 miles and the local shikaris immediately produced spotlights, operated on the car battery, with which they searched the fields and forests in an expert manner. With the greatest difficulty, shooting was restrained and in the course of the drive we saw several small parties of nilgai and chital. They were distinctly alarmed by the noise of the car, but once the light was on them they could be approached within easy shooting distance. After we failed to shoot anything in the beats, the local enthusiasts took over the meat supply problem. They preferred to use our host's tractor rather than the jeep, for once the eyes were sighted, the animals could be approached in a straight line, there being less need to go round nullahs and other obstacles! The party left after supper and were back in two hours with a chital stag and doe. Only two shots were fired, and another doe got away wounded!

We were in one of the few parts of the country where tiger and deer still existed in some numbers. But the tigers in the forest have been shot out or driven into the scrub-covered ravines where a jeep cannot reach them and which do not afford enough cover to the deer. The tigers have, therefore, to pick up cattle from the adjoining villages, while the deer that have survived the shooting are in the forests separated by miles of cultivation. Though relatively safe from the tigers, they come into the fields at night and are indiscriminately shot wherever they can be seen from jeeps or tractors. My experience is restricted to a relatively small area, but it did appear that this anomalous distribution of tigers and deer was widespread.

Unless the Indian Board for Wild Life is able to carry out more actively the work which it has undertaken, both tiger and deer will be completely gone in a few years. All officers no doubt have in their files cyclostyled copies of the resolutions passed at the first meeting

of the Board held in 1951, stating that wild animals should not be shot at night from cars and listing the Great Indian Bustard as one of the birds which is in urgent need of protection throughout the country.

Every year we hold a Wild Life Week, presumably to draw the attention of the public to the resolutions of the Board, but seven years after the setting up of the Board we have departmental heads of districts—persons directly associated with the administration of the law and the carrying out of the Board's resolutions so ardently endorsed by the President, the Prime Minister, the Chief Ministers of States—not only ignorant of the wild life preservation laws but utterly callous and indifferent to their enforcement when their attention is drawn to them.

The need of opening up more land for cultivation is admittedly making things difficult for wild life preservation, but there can be no doubt that if an intelligent and practical approach is made we can solve the problem. Last year 120,000 deer were shot by licence holders in the State of California alone, but the report states that this was not enough and the number left over for the following year will necessitate more deer being shot to prevent there being more animals than the country can support. No attempts at the census of wild animals, other than the lion in the Gir, have been attempted in India, but though we have many areas ecologically as good as those in California I wonder if the total number of deer left over the whole of India is anywhere near the number shot there annually.

Humayun Abdulali.

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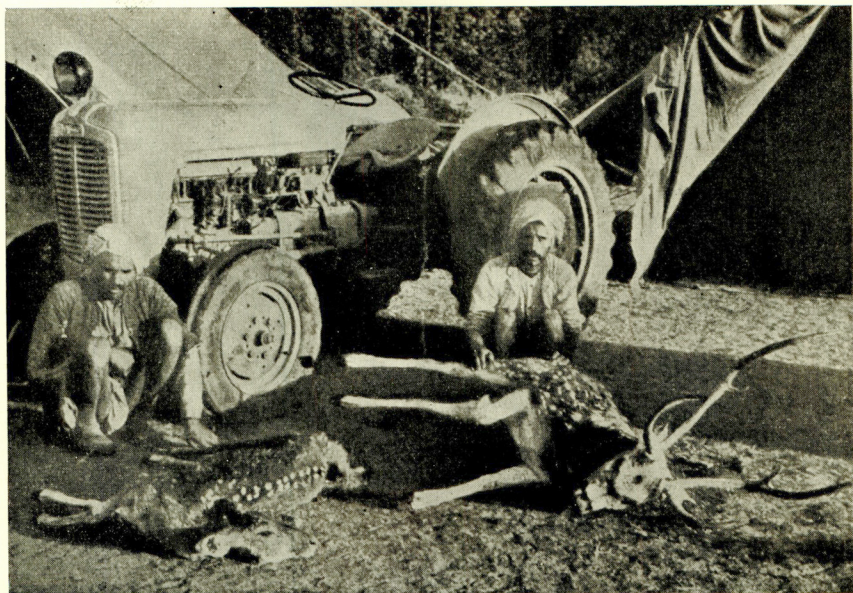
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Further Wild Life Notes from Madhya Pradesh

(*Re-printed from the Journal of the Bombay Natural History Society of August 1959. By kind courtesy of the Editor and Author.*)

After I had sent in the note on wild life in north-western Madhya Pradesh, I had the good fortune of being able to join a party of Americans shooting big game and collecting natural history material at Supkhar, 2250 ft., Balaghat District, Maikal Range, eastern Madhya Pradesh.

From Nagpur I was driven to Supkhar about 180 miles away by the Managing Director of one of the leading shikar agencies in the country. The Society had on earlier occasions drawn attention to various irregularities committed by his clients, and I was assured by the Director that every care was now taken that no laws were broken. Panther, according to



Tractor and the Meat.



Remains of a Rhinoceros in Nepal.



Wild Life Exhibits
at the World Agriculture Fair, New Delhi—1959.

the law, could not be shot at night from or within 100 yards of the motor vehicle in which the sportsman travelled. To comply with the law, I was told that his clients were taken out in jeeps at night, but when the animal was sighted the shikari was dropped on the road, with an assistant who manipulated the spotlight worked on the car's battery. The jeep was then driven off for a hundred yards, a length of wire to feed the torch being unrolled along the road. We did not go into details as to whether the jeep reversed 100 yards into darkness if the panther was on the road, or how corners were manipulated !

When we reached camp, my hosts, who had got in about 10 days earlier, had already shot their quota of 3 tigers and 3 panthers. Mr. and Mrs. M., being newcomers to India, were naturally guided entirely by the advice of the officials of the Company, and one panther at least was shot in an after-dinner drive. I was a week in camp and, though I looked carefully, I was unable to find any trace of the wire mentioned nor obtain any suggestion of this having been used when the panther was shot. During my presence in camp, several attempts were made to shoot bear at night and, though none was encountered, a pig was shot without any 100-yard length of wire.

The Supkhar Block was closed for deer, and except for a few cheetal, a pair of four-horned antelope, and a single barking deer I saw no large animals, though the country held magnificent stands of sal forest interspersed with large maidans ideal for deer and other herbivora. I also saw no sign of tiger or panther.

During my stay (9th to 15th March 1959), we visited the Kanha Sanctuary which is only about 30 miles north of Supkhar and in the same range of hills. This is an area of about 100 sq. miles at an elevation of 2000 ft. surrounded by a range of hills. Entry by road is possible from two directions. It is well controlled at least on one side where there are two barriers and many formalities to be gone through. On the far side, exit was less formal. In one afternoon I saw several hundred each of cheetal and swamp deer, a herd of blackbuck, several sambar, one solitary and a party of about 10 gaur, red junglefowl, painted partridge, and quail of several species.

The Kanha forests are apparently being fully worked for timber and, if in spite of this they can hold such quantities of wild life without any obvious disadvantage to the trees, I can only stress the necessity of giving this place greater publicity and persuading other States to try and create similar conditions in their own forests. I have visited the sanctuaries at Manas, Sona Roopa, Kaziranga (Assam, 1950), Bandipur (Mysore, 1952), Dandeli (N. Kanara, 1948 and 1951), but have no hesitation in saying that none of them held a fraction of the wealth of animal life visible at Kanha. I drove back to Supkhar after an early supper and the eyes of cheetal in the maidans glittered like the lights of a large city seen from an

elevation at night. Outside Kanha we drove some 50 miles to Supkhar but failed to see anything, except an occasional fox or jackal. As compared with Kanha, the surrounding areas, including the Supkhor Block where I pottered about for a week, appeared to have been completely shot out.

A recent press note (Nafen, 15th April 1959) stated that after tea, jute, and textiles, tourism was India's fourth biggest foreign exchange earner and that the number of tourists had gone up from 23,000 in 1953 to 100,000 in 1958.

The visiting shikari or safari tourist, as an individual, no doubt spends a larger amount of money in the country than the average sight-seer, but he can only be a small fraction of the whole number. To satisfy the visitors elaborate arrangements are made to ensure that the full quota of animals permissible is shot within the short period for which the block is held, while the average shikari seldom shoots his limit. The pressure on the game population is already excessive and it may be questioned whether in the long run it is a wise policy to 'sell' the remains of our wild life under the temptation of earning a few more dollars.

Humayun Abdulali.

CALL OF THE JUNGLE.

It happened soon after sunset
On a hot and sultry day,
When I heard the voice of the jungle
And knew what she had to say.

I heard the snarl of a panther,
The grunt of an angry boar
The moan of a distant tiger,
The call of a frightened doe.

And though my eyes searched the shadows,
There was nothing I could see,
But I felt a great contentment
For the jungle had spoken to me.

Then there came to me understanding
I had reached a long-sought goal,
At last I had found and I knew her
In her innermost secret soul.

C. H. COURTS.

Wild Life Preservation

By MR. RANDOLPH C. MORRIS, F.R.G.S., F.Z.S.,

Editor, The Indian Wild Life.

"The Murder of a wild animal species consists in taking from it that which man with all his cunning and all his preserves and breeding cannot give back to it, its God-given place in the rank of living things. Where is man's boasted intelligence, or his sense of proportion, that every man does not see the monstrous moral obliquity involved in the destruction of species!" So wrote William Hornaday, author of "Our Vanishing Wild Life", and his words are quoted in the excellent little pamphlet: "Live and Let Live" issued by the Association for the Preservation of Wild Life in the United Provinces—the first Society of this nature to be formed in India. The Association quite rightly describes the saving of the country's fauna as a National task and as "Everybody's business". The first task to be tackled is the education of public opinion in the right direction, for until this is accomplished the heart of the people will not be in the work, the issues involved insufficiently appreciated, and little good will result.

In South India we have species of wild life of great beauty and interest, but this wild life is being destroyed at an appalling pace by the unscrupulous for gain, and by the thoughtless for their enjoyment. The apathy of the public to what is going on must be changed before it is too late. There must be no misunderstanding about this: the development of the country has to proceed and there is no suggestion that crop-raiding animals should not be destroyed in cultivators' holdings: but there is no excuse for the extermination of these species beyond cultivated areas.

I should like to mention an example of village protection of Wild Life, which has proceeded for many years now. Near Madurantakam, about 40 miles from Madras, is a village which has prided itself in the protection it has afforded to bird-life, especially water birds; and the result is a sight for sore-eyes – a marvellous sanctuary which the birds have taken every advantage of for breeding purposes. The villagers guard their bird sanctuary jealously, and any visiting party seen with a gun is warned off, while the camera alone is allowed.

I will quote here a part of the preface to the objects outlined in connection with the Society for the Preservation of Wild Life in South India, of which unfortunately one now hears little.

"In any country the perpetuation of the indigenous animals and birds is essential for commercial, scientific, agricultural, aesthetic and sporting reasons. A good deal of the

wealth of the South of India lies in its timber which cannot be economically extracted except by elephants, so that a supply of these wild animals must be maintained. Similarly revenue is realised annually on account of the products of wild life : this could doubtless be increased without the fauna being adversely affected. A very great amount of good is done by such birds as Woodpeckers, Owls, Nightjars, Egrets, Drongoes, Mynas, Kingfishers, the Blue Jay (Indian Roller); the Trogon; the greater and lesser Hornbills; the Indian Hoopoe; Orioles; Minvets; Paradise Fly-catcher; painted and ground Thrushes; Shrikes; the smaller Hawks, and many others, by destroying insects and other pests which do damage to crops, domestic animals and human beings. Fresh water fish of certain kinds assist in keeping down malarial fever. Information of considerable use to science is acquired by a study of wild animals: the stocks of Museums and Zoological Gardens must be replenished from time to time. The shark dreaded by seamen, and considered vermin, has through scientific investigation, yielded "Insulin" the drug which has brought relief to thousands suffering from diabetes. The beauty and interest of the country side is considerably added to by the presence of most wild animals and birds: a country devoid of all wild life is unnatural. A study of the habits and ways of wild creatures affords one of the healthiest and most beneficial forms of recreation for a people and should be encouraged. One of the finest forms of training of a country's youth and recreation for its adults is provided by the pursuit of certain wild animals *if strict observance of the law of sport is followed*. Patience, ability to overcome hardships, powers of endurance and observation, mental and physical hardships, fitness, courage, all qualities which go to the building of the best citizen, are fostered in the pursuit of sport, whether observation, photography or the securing of trophy be the goal. These should be the attributes of the sportsman.

The fauna should be preserved both in the interests of science and the cause of humanity. The Indian Moghul Emperors Akbar and Jahangir were the greatest Naturalists and preservers of Indian fauna of the age: and drastic laws were promulgated for this purpose.

Col. Stevenson Hamilton of the Kruger National Park in S. Africa refers in a pamphlet to the desiccation that has set in over some years there, which no longer supports game.

The writer might well have been referring to conditions in many parts of India, especially South India. For example, large tracts of the drier jungles of Mysore and the Coimbatore District were once cultivated. The boundaries of the fields are still clearly defined, and numerous old wells and tanks, now dry, are a feature of those parts. The jungle is now scrub: with a scanty rainfall. In the Coimbatore District Manual (by Nicholson) is a good description of how, after the country settled down to peace and plenty in the years before the great Indian famine, there developed a "land hunger" on the parts of the ryots—and large areas of jungle were opened up for cultivation and tanks constructed,

for more than the people could efficiently work. Later came the years of lean rainfall culminating in the terrible tragedy of the great Indian famine, and the improperly tilled areas were mostly abandoned and went back into jungle but of the scrub type, growing in a now semi-desiccated area.

It is estimated that game probably requires less than 30 per cent of the ground to keep the same number of domestic cattle in condition, and that cattle require from 4 to 5 acres a head to maintain fair condition all the year round. The opinion is expressed that given watering facilities the jungles could hold ten times as much game as they do now, without difficulty, and with this I agree.

The people are the final guardians of their wild life, and without their co-operation legislation will not alone succeed in curbing the activities of poachers, who are the chief destroyers of Wild Life, of both sexes. The wild animals and birds are among a country's greatest assets, and should be regarded as a sacred heritage.

With the deer exterminated the carnivora will take a greater toll of live-stock and where this is not available the carnivora are likely to take to man-killing, as has already occurred in parts of India.

Without our wonderful bird life the ryots' crops would be at the mercy of innumerable vermin : and in this connection I am delighted to hear that Mysore is following the example set by Hyderabad, Travancore, Cochin and other states, and is having a bird-survey made of the State, from which the cultivators can be taught to classify birds into two categories—their friends and their enemies.

Further, to quote again from Hornaday, it should not be difficult for the more educated to realise that, "the animals now in jeopardy are links in the chains of Evolution, and we are yet very very far indeed from understanding the agencies which have moulded the often marvellous adjustments they display in relation to their environment and the key to these agencies is to be found in their living bodies that we may follow our conclusions to their logical end. The more we learn of the mysteries of Life in all its manifestations the better shall we understand our own bodies.

Referring to carvinora Col. Stevenson Hamilton might, here again, be writing about India, so well do his observations on lions apply equally to tiger. He observes that the natural function of carnivorous animals is to prey upon the herbivorous species, and it is obvious that it is the sickly, the less alert and intelligent, as well as the less active and older individuals, which most readily fall victims. Carnivorous creatures are in fact equally on land, in the water, and all in the air, nature's own way of maintaining an equable balance, checking undue increase, destroying the unfit and aged, and keeping the herbivorous species

healthy and active by the constant destruction of the unfit. In their own case the same principle holds good, for those unable for one reason or another to capture their swift and wary prey cannot survive in the struggle for existence.

When man attempts to usurp Nature's function, he is obviously at a hopeless disadvantage, and the results of his efforts are often seen in the deterioration of species which, though still in a wild or semi-wild state, have no natural enemies. Nor is it possible under natural conditions for carnivorous animals to increase out of due proportion to the herbivora. Both vegetarian and flesh eating animals are dependent on the amount of their food supply, and their numbers are strictly regulated by the supply available in each case. Each species of the former has its own favourite type of grass, or plant, which it mainly favours; when this particular type becomes scarce in an area the animals wander further afield in search of their favourite food; and if it cannot be found in sufficient quantity, *breeding slackens* and the more weakly die, so that the number of animals is again adjusted to conditions. Similarly with carnivora, if for any reason, through destruction by man, epidemic, disease, or other cause, herbivorous animals in a locality become suddenly scarce, the beasts of prey must migrate to where the food supply is adequate, or else, precisely as in the former case, breeding is interfered with, and the weaker and less intelligent individuals will die of starvation; so nature once more will adjust her balance. It is at such times of scarcity that the largest carnivora become a danger to the domestic animals of man. In the ordinary way carnivora are only too willing to give man and his belongings a wide berth; but when urged by hunger, they become bold, and an individual having once erred with impunity, and finding it easier to catch domestic animals than wild game, is apt to repeat the practice until destroyed.

This is well exemplified in the case of the Kruger National Park. While within it, and provided with a plentiful supply of their natural food, lions give very little trouble to the domestic animals either of the rangers or of the residents and form no source of anxiety; but those bred outside, finding little game available, sometimes cause trouble by stock killing. In Rhodesia, after the rinderpest of 1896 (which wiped out herds of game animals) the lions, which up to that time had not been specially troublesome to settlers, being deprived much of their food supply, became for some years a real pest. But it must be remembered that an excess of felines killed off will result in an increase of crop-raiding animals: especially pig.

As with lion so it is quite common for the tiger to travel many miles in a single night. Tigers often have definite beats which they patrol, visiting localities in rotation with unflinching regularity. Many tracks of tiger up and down nullas and streambeds may seem to indicate the presence of several tigers, working in a locality, whereas the tracks may quite likely be those of not more than two.

The author of the pamphlet makes some interesting observations on the normal increase, gross and net, of the large antelopes, and of lions, in the Reserve. He puts the gross increase of the larger antelopes under natural conditions at about 30% annually, and the net increase at about 15% under existing conditions. For the difference of 15% between gross and net increase he considers that about 10% is due to lions and 5% to all causes, which include wild dogs, cheetahs, leopards, crocodiles, snakes, poachers, accidents, deaths in calving, single combats between males, and deaths from old age, after about 15 years.

While it may be said that these figures of gross and net normal increase equally apply to the deer and bison, as well as to the larger carnivora of India, in a well-ordered and run game sanctuary or National Park (sambhur, cheetal, bison and tiger parturate about once in three years), I estimate that as things are at present, the death rate in respect of deer in the Reserved Forests of S. India is well over the birth-rate, chiefly due to poaching. Hubback writes: "There is some fatal period reached in the life-history of wild animals when the continuing abnormality of a disturbed existence appears to break their spirit and they are then liable to cease to produce their species. This psychological phenomenon is not properly understood, but is recognised as existing by persons who have studied wild life at close quarters.

Bison may be said to be holding their own: they are little poached, and but for periodic outbreaks of rinderpest, and foot and mouth disease, caught from village cattle grazing on their grounds, their net increase would be in the region of 25%. They are not subject to attacks by wild dogs and the larger carnivora to the extent deer are, being more formidable, though I have known cases of calves being killed by wild dogs, and the popular idea that tiger will not tackle a mature bull is quite incorrect. I have come across quite a number of cases of bulls being killed by tiger, and also instances of a bull bison coming off best in such encounters.

The South Indian Bear, for some reason termed the "Sloth Bear" (it is by no means sloth) will survive in the jungles when all else are dead and gone. The bear has few natural enemies. I have known two instances of bear being killed by tiger, and one by wild dogs. Shortsighted, bad tempered and panicky the bear is normally shunned by man and beast.

The tiger may be said to kill about once in every ten days or a fortnight if its prey happens to be a large animal, and more often if (as in the case of kills of domestic cattle) its kill is removed or disturbed. A tiger will also kill small animals such as porcupines, hares, pangolines, and even rats and frogs, to supplement its diet, when hungry. A tigress with cubs is likely to kill once a week, or oftener if its kills are disturbed.

Tigresses have litters of 3 to 6 cubs at the birth, of which normally not more than two survive. In the natural course of things Nature so rules the ratio of predatory animals, and their prey, that the increase of the former is governed by the latter: no wild animals under natural conditions are allowed to increase beyond the limit of the food available, and when carnivora do so it is because their food supply is reduced by man's efforts.

It is an acknowledged fact that the presence of sportsmen of the right type in the reserved forests is of very great assistance in the matter of game preservation. When I use the term "of the right type" I refer to the man, or woman, in whom are uppermost, not the senses of blood-lust and trigger-feel, but the senses of humaneness; the love of the chase for the thrill it provides and the necessity of having to pit his cunning and skill against the natural protective similar attributes of his quarry (bred in him from prehistoric time when man *had* to live on wild animals for his food and defend himself against their attacks), and the love of nature as represented by the wild fauna and flora he comes in contact with and observes. I refer to the type of person who is not depressed and peeved at the end of a day in the jungle, or on the conclusion of a camp on shikar, because he happens to have had no luck; that is to say fortune has not come his way in the shape of trophies. He has scorned to shoot poor heads; and he has had an enjoyable time in the forests, an insight into nature and its workings. He is satisfied.

In what way is he humane? There are certain laws of shikar every right minded sportsman sets himself to follow. First and foremost, it is his duty to follow-up, and to do his utmost to finish off a wounded animal so as to put it out of its pain. No considerations of personal safety should be allowed to deter him from this humane purpose even if the animal is a dangerous one, or is liable to be dangerous on being wounded. There is all the more reason why the animal, in this case, should be located and destroyed as it is likely to become a danger to the public. I do not infer that obvious elementary precautions to be taken when tracking up wounded dangerous animals should not be followed. I mean that no plea or excuse of danger to the person should be permitted in a man who has rendered an animal dangerous by wounding it. His duty towards the animal from a humane point of view, and to the public, should be obvious to him; and his carrying out of this duty of going after the animal automatic and a natural sequence in the game. Giving judgment in a case brought by the Mysore Forest Department some years back against a Coorg Planter the learned judge remarked as follows :—

"A hunter having wounded a dangerous wild beast such as an elephant, a bison, a tiger, or a panther and others, is under a moral obligation and public duty to track that animal to the farthest extent of his ability and endurance to ensure its death or to make certain of its ceasing to be a danger to all whom it may come across. If that wounded animal crosses into the land of the neighbouring foreign state that obligation and that public duty are in no

whit lessened. The necessity to render a dangerous animal innocuous would be urgent, real, and imperative, and such necessity would in law create justification sufficient to save unlicensed entry upon another land from being tortious and trespass."

The case was dismissed as the judge quite rightly held that no considerations of frontier or boundary should prevent a sportsman from following up and finishing off a dangerous animal wounded under licence in an adjoining territory or district.

When following up, the sportsman should pay due regard to the safety of his shikaris and trackers. They should not be asked to do anything the sportsman himself might be unwilling to do.

Finally, the sportsman's trophies should not be collected unfairly: no shooting of bison and deer by car or torch light on the highways: nor from machans and hides over pools, salt-licks and game paths; nor, I would add, from elephant back which I consider just as unsporting.

Such are the true tenets of big game hunting upheld by Indian and European sportsmen worthy of the name; a manly and fascinating sport if carried out correctly and with courage: but one which no person has any right to pursue if he or she is not prepared to undertake the obligations the sport imposes and demands.

By far the greatest damage to the fauna is done by poachers, men who make a good thing by selling the flesh, skins and horns of animals, illicitly killed, either by stalking or by sitting up over pools and salt-licks. In many areas up to a few years back holding large number of deer, sambhur and chital are now uncommon, while in parts of the plains black-buck and chinkara have been nearly or entirely wiped out. Large numbers of birds are sold, netted and trapped, both alive and dead, in season and out. Some of the chief offenders are the parties of Pardis (or "Hucci-Picci-Owru") who wander from place to place in South India, as elsewhere, wiping out all small game and black-buck by netting and snaring, and very clever indeed are their tactics. Only recently a party combed out the Yelwal Game Preserve near Mysore. I consider these people are a menace and should not be allowed in even unreserved forests, as also the "Buruday Bestas" who make a living of netting and clearing the rivers and pools of fish. The plea, often heard, that this is a long-time custom cannot in these enlightened days be upheld.

It is a sad fact that a very large number of guns issued for crop protection near Forest Reserves are used for poaching. The Police and Forest Subordinates are largely to blame for this for their indifference to what is going on: but it must be remembered that so long as the public, as represented by the villagers, are on the side of the poacher (supplying them with meat as he does) the Police and Forest Subordinates, especially the latter, have an unenviable task. It is a matter for regret also that many magistrates

seem to be at present unwilling to inflict really deterrent sentences on offenders who are caught. Much sterner punishment is required, but the law cannot improve matters to any great degree unless the public can be educated to understand the justice of the measures taken and whole-heartedly support their enforcement.

Many people are of the opinion that the condition of wild life in the Government Reserves gives no cause for anxiety. This is the case in very few localities however, forests still inaccessible to the poacher. But with the increase of motors, better communications, cheap firearms and electric torch lights, the time is not far distant when no quarter of the forests will be safe from the poacher's destroying tactics, and as he finds his victims harder to bag, so deeper does he penetrate into their sanctuaries. The use of electric torches and spot lights is only excusable in the destruction of carnivora that have become a menace to live-stock. I have already mentioned that the presence of licensed sportsmen of the right type in the Forest Reserves is most desirable, and has been recognised as such for many years; first and foremost he acts as a curb to the pernicious activities of the poacher. The sportsman is out for a limited number of big heads and will not attempt to kill immature males, nor any thing of the female sex. His trophies are generally of males past their prime, and which have mostly served their purpose in propagating the species. His knowledge of wild life gained by years of experience in the jungle, in contact with wild animals, produces in him those qualities which are essential attributes of a warden of the game in the forests: in the true sense of the word. Hubback rightly says: "The true sportsman gradually becomes the champion of wild creatures, and it is chiefly owing to his initiative and understanding that sanctuaries have been established. Nowhere, perhaps has this been better exemplified than in Ceylon. The religion of the land is mainly Buddhism—a religion that extends its benevolence to animals—yet the outcry for protection of the fauna has not come from the Buddhist, but from the men who shoot." Herein lies the difference between the true sportsman and the poacher, other night-shooting motor-fiend, who care for neither sex nor maturity, all are alike to his insatiable desire for meat or to kill. In the Coimbatore District all sportsmen are requested to look for, and report the existence of, illicit machans (on tree) and hides (on the ground) at water holes and pools and salt-licks in the jungle—some of the hides are very cunningly hidden. The Forest Guard in whose beat one or more are found is punished. In the Mysore State visiting sportsmen have seen any number of illicit machans from which poaching occurs. If suitable rewards could be offered for information leading to the conviction of poachers, good results should be obtained.

Certain animals including panther, wild dogs and crocodiles are classed as Vermin, and people are encouraged to kill them, by any means. But man, in his lust and greed for the killing of the country's fauna, is the greatest Vermin of the lot.

Who does not love seeing animals in partial freedom in a well organised and up-to-date Zoo, as exists in Mysore? Yet surely it is still more fascinating to see these animals in their natural surroundings, the forests.

An Introduction to Wild Life Photography

It is doubtful whether in, say, ten years time that the animals we find today in India's Sanctuaries and forests will still exist. But with the present technical achievements in the realm of photography it is beyond question that today's photograph, if sufficiently important or interesting, will survive the future, even for many hundreds of years. The same cannot be said of a 'skin' or trophy and it is a matter for thought that to-morrow's lecturer will be far better equipped with film or slides (rather than with a moth-eaten skin) when describing an 'extinct' cheetah, for example.

It is arguable that the taking of a good wild life photograph requires more skill than making a difficult shot, but it is undeniable that both situations are prone to a large degree of luck. They both have a common factor, however, in that the better the equipment the greater is the chance of success. This does not mean that the person with comparatively an inexpensive camera is unlikely to be successful, but merely that the odds are against him. In fact, in the past many outstanding photographs of wild animals have been taken with a 'box' camera, but it is equally true to state these are the most publicised. Whatever equipment is used, however, I consider the most important necessities for a 'would-be' wild life photographer are patience and perseverance; this is singularly applicable to conditions encountered in India.

It is now, perhaps, a maxim that a good wild life picture is a combination of three essentials: a good light, a fine subject, preferably in full view (an animal suffering from rinderpest hardly presents an imposing spectacle however close one can get) and a photogenic setting. The reader may imagine how seldom these three coincide. When, if ever, they do then it is up to the photographer to ensure that his camera is set correctly and to press the button with a steady hand—simple in theory but after three hours on elephant back through thick forest and perspiration clogging the viewfinder, in practice, a different matter altogether. The result frequently appears as a faint streak on a grey background. It is, therefore, almost equally important that the owner be completely familiar with his (or her!) equipment.

Cameras vary as do the rupees in people's pockets. But in the fields of wild life photography—here we are concerned only with 'still', not cine—it is the true miniature, the 35mm. that is universally the most popular. Not only is it economical to use, especially with colour material, but possesses a wide range of supplementary lenses. It is also light and compact and certain makes, notably the Leica, can withstand great variations in climate with no loss of efficiency. Undoubtedly a good miniature camera will make a large hole in

one's pocket but they are designed to last a lifetime—and do so. With animals and birds, however, a long focus or telephoto lens is almost as important as the choice of camera.

There is a technical difference between 'long focus' and 'telephoto' (they both magnify the image) upon which there is no need to dwell here. But if one is seriously considering taking up wild life photography one or the other is, in the writer's opinion, indispensable. For a 35 mm. camera the focal length should not be less than 135 mm.—more if the photographer is working from a hide or machan under semi-controlled conditions, i.e. with a tripod over a salt-lick for example. Without a tripod a large lens (200-400mm.) becomes unwieldy and is almost impossible to hold still enough in the hands alone to obviate a shaky and blurred picture; this is certainly the case with colour film and even with high speed black and white material it still leaves much to chance.

A great deal of the previous paragraph rests on the timidity of the subject and on how close an approach one can make. Regrettably, in India most wild animals are frightened of man—even when he is riding on the back of a tame elephant—this, as well as the type of country which one is most likely to encounter present an important factor in the selection of a suitable lense. Generally one cannot go far wrong to assume, 'the larger the better', for it is only in exceptional circumstances that a tiger or even a wild elephant is met face to face these days. There are briefly three methods by which one can photograph wild animals in India. I expect there are others but these three are usually the most practised.

Two of them have been mentioned already; from elephant back and from a hide. The third is on foot. If the reader happens to be a second Jim Corbett then there is no need to say more. But if one is unfamiliar with the forest then the chances of a successful picture are virtually nil. Even with experience, luck as always, plays a prominent part for a camera requires if anything a steadier hand than a rifle; and, of course, is of little use against a charging elephant. Another important point is that with photography, two is one too many. The average shikari has no knowledge of even the rudiments of photography, and on being asked to show on 'the best place for taking pictures of animals' will reveal, after an hour's strenuous battling through thick forest, a water-hole touched only by the mid-day sun for an hour or two. The answer is 'know your country'. Find, if possible, a suitable place where it is known that wild life will appear during the daytime—build a hide—and patience should do the rest.

Photography from a hide on the ground is, probably, the method by which the best pictures will be produced. From the technical point of view it leaves less to chance—the camera is mounted on a tripod, pre-set and pre-focussed and unless a rogue elephant emerges

there is, generally speaking, little to fear although a climbable tree near-by is a wise precaution. The hide itself can be made of khaki cloth or canvas but it is as well to make sure that the top is covered, for by remaining completely hidden the greater the likelihood of success.

Although this article does not venture into technicalities and is only intended as a rough guide in the approach to the subject, a precise knowledge of both camera and animals is very important. One has only to study the work of the experts. Sanderson, Salim Ali, E.P. Gee, and others to realise that their pictures were made, not by a casual acquaintance with the jungle and forest, but through many years of experience and patience.

J.H. Burnett



Fishing in Kashmir

We visited Kashmir for the first time in 1915 when I was 10 years old. My father had six months leave and the whole family, comprising my father, mother, three sisters and two brothers took a train to Jammu, and then trekked from Jammu to Srinagar with pack and riding mules. There was no road then, only a bridal path, and it took us eleven days to reach Srinagar from Jammu. My father was a great walker and couldn't look at a hill or mountain without wanting to see what was on the other side. I walked more weary miles that year in Kashmir than I have ever done since, but we did see a great deal of Kashmir and many remote and beautiful spots which I have never had the courage to attempt to reach again.

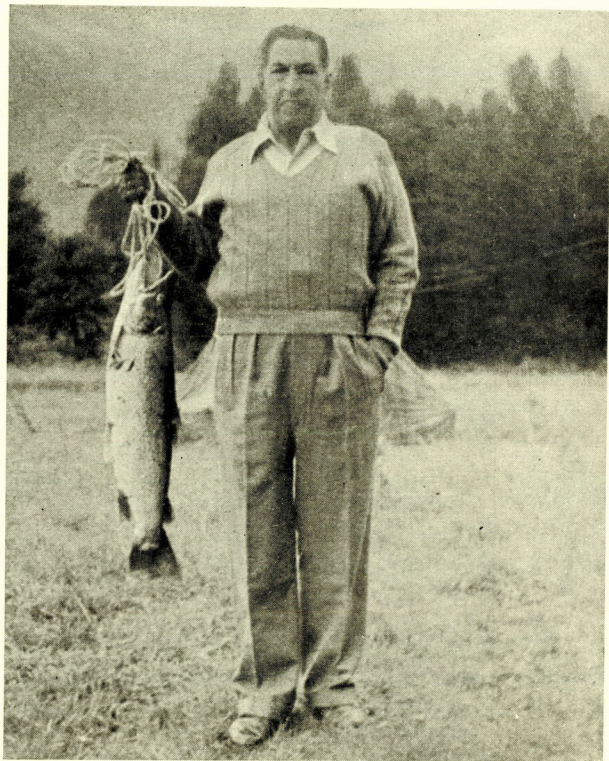
Amongst many other interests my father was a keen fisherman, and that first year in Kashmir he introduced me to the noble art of angling. We fished in various rivers and lakes and met with fair success. After walking all over Kashmir my father decided to spend our last month in Kashmir in a camp at Pahalgam. Here, he and I fished the Lidder river and its many tributaries, and we had phenomenal catches. With one rod and a single hook I do not think I ever caught less than 80 fish. There were no crown or rainbow trout in those days, these were stocked in the streams many years later. The rivers were, however, full of a species called "Snow-Trout", which are delicious to eat, and are from about 6" to 12" in length. I was very popular at Pahalgam that year because I used to send six to a dozen fish

to each camp, and established excellent relations with the Post Master, the Inspector of Police and other officials in the town. I believe that trout were stocked in the Pahalgam rivers towards the late '20's or early '30's, and in my opinion these rivers and streams continue to this day to provide the best fishing in Kashmir.

And so from 1915 to 1960. In early May this year I was informed that I could have upto 2 months leave, and as the urdu saying goes, "*Mullah Ki Daur Masjid Tak*", the Lall family made plans to go to Kashmir.

After two weeks in a hut at Gulmarg where we played a lot of golf, we found ourselves in a camp in Pahalgam, and of course, I had obtained fishing permits in Srinagar for every third day in one or other of the several well known streams in that part of Kashmir. I had caught a great many trout in previous years, the biggest being 7 lbs. in 1956, but I had heard of other anglers who had landed fish of 10 lbs. and 11 lbs., and in 1959 another Delhi angler had caught a 13 lb. rainbow trout in Kashmir which was acclaimed as the all-time record for India and Asia. I had always dreamed of catching something really big though I hardly dared hope it would be the biggest, and so on the 2nd July at 11.30 a.m. I was fishing in a deep still pool in the "POHRU" stream when something that felt like a log of wood struck my Lure; I knew I had got a really big one, and you can imagine my delight when a few minutes later this monster jumped clear out of the water and we saw how big it really was. Trout have a habit of jumping out of the water when hooked, and this is how they frequently dislodge the hook from their mouths, or break the Line. I immediately reduced the tension on my small spinning reel to almost nil, and this prevented the fish from jumping again. After playing it gently for just over 20 minutes, I had it safely in the landing net. We put it on the scale and to my great delight it weighed $13\frac{1}{2}$ lbs. and was 30" long and 17" in girth. When these particulars were reported to Mr. G.M. Malik, Director of Fisheries, J. & K. Government, he replied to say that this was the biggest trout caught in Kashmir since 1924 when some one caught one weighing $14\frac{1}{2}$ lbs. This fish was taken on a March Brown Lure, 14 lbs. nylon line, using a small spinning reel and a few lead weights near the bate to enable longer casts.

G.W. Lall.



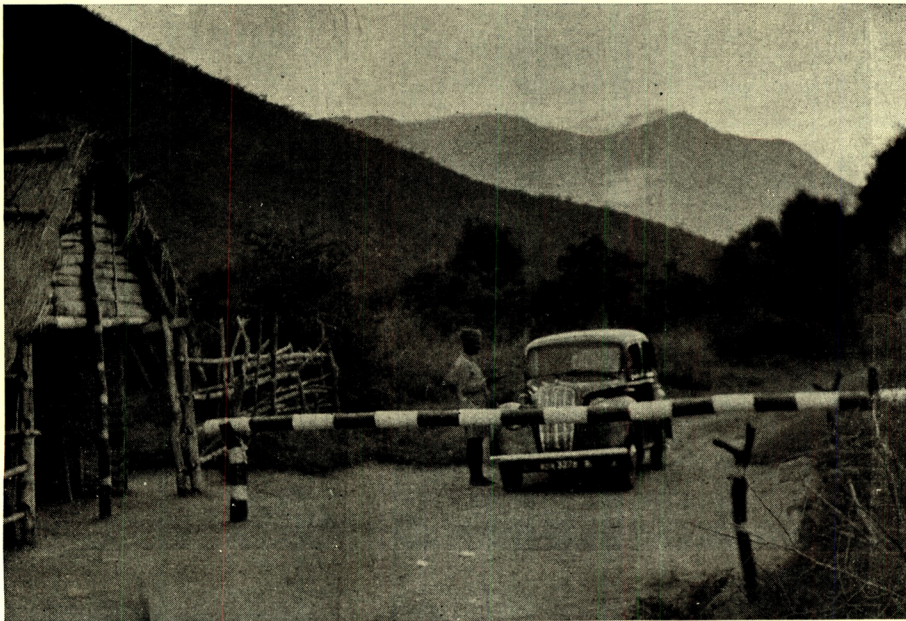
Shri G. W. Lall with his 13½ lb Brown Trout caught in the waters of the Pohru—The largest hooked in Kashmir since 1924.



DR. SALIM ALI OF BOMBAY
The celebrated Ornithologist of world renown.



Major Mainwaring with his 55 lb Mahseer caught
at the junction of the Tons and Jamuna rivers.



Good Game Protection arrangements by the Nilgiri Game Association—
An Anti-Poaching Gate.

Who's Who in Wild Life Preservation

DR. SALIM ALI, Our Famous Ornithologist.

Mr. K. P. S. Menon in his travel book "From Delhi to Chungking" speaks of meeting the subject of our article, Mr. Salim Ali. He remarks that, even if you did not know that Salim Ali was a world famous authority on birds, his features would readily tell you. He seems to have grown up to resemble the objects of his life-long enthusiasm, with brilliant bird-like eyes and a prominent bird-like beak! Whether it is the beak of a predator, an insectivore, or an eater of seeds, we need not investigate!

Salim Ali was interested in animals, particularly birds, from boyhood, first as pets, then for sport, and later for scientific study and conservation.

After studying Zoology academically in Bombay University, he specialised in Ornithology (particularly Indian birds) and trained in 'Systematics' and Taxonomy under the celebrated Ornithologist, Professor Erwin Stresemann of the Berlin University, Zoological Museum.

Since 1927 he has been occupied with Scientific Ornithology, his chief interests being Ecology, Zoogeography, Bionomics, Behaviour and Economic Ornithology.

He has conducted ornithological explorations in practically every part of India and Pakistan (before partition), and also in Afghanistan and western Tibet. The large number of scientific reports based on this field work now form the basis of much of our present day knowledge of Indian birds, especially on the ecological side.

Salim Ali has been intimately associated with the Bombay Natural History Society at least since 1910, first as a student, then as Assistant Curator for some years and in various honorary capacities—Honorary Secretary, Field Researcher etc.—since 1931. He has been on the editorial board and Joint Editor of the Journal since 1928 and was selected Vice-President in 1956.

He is the author of the following books:—

- (i) The Book of Indian Birds (now in its fifth edition).
- (ii) The Birds of Kutch.
- (iii) Indian Hill Birds.
- (iv) The Birds of Travancore and Cochin.
- (v) The Birds of Sikkim (in press).

He was recently nominated by the Government of India as Chairman of the Indian National Section of the International Council for Bird Preservation, and of the Bird Wing of the Indian Board for Wild Life.

Among his other distinctions and awards, we may mention his election as Fellow of the National Institute of Sciences of India; as member of the permanent Executive Committee of the International Ornithological Congress; as Honorary Member of both the German and French Ornithological Societies; as corresponding member of the British Ornithologists' Union and of the similar American Union; and as corresponding Fellow of the Zoological Society of London. He was awarded the Joy Gobinda Law Memorial Medal of the Asiatic Society for his "Researches in Asiatic Zoology" in 1953; the "Padma Bhusan" in 1958; and the D.Sc. (Honoris Causa) of Aligarh University in 1958.

Salim Ali wears his many distinctions as lightly as he does his years. He is one of the most active and influential defenders of our wild life. He never fails to answer a query about Indian birds, from whomsoever it may come.

R. L. H.

The Tons River

The Tons river joins the Jamuna just below Kalsi.

This river as far as appearances go is one of the most lovely rivers in the Doon Valley. For some utterly unexplained reason it holds very few Mahseer except for two months in the year. In the months of September and October when the fish are on their downward trip after spawning they are plentiful at the junction of the two rivers.

I have fished this river for many years. During Sept. and Oct. the river starts clearing after the monsoon rains. It is advisable to use plug and medium tackle 200 yards or more of 13 or 15 lbs. monofilament line. The river being low during Feb.-March, and April, one may only expect light fishing, which is good. My wife and I have had excellent sport during this period with spoon and a 4 lb. thread line when we have caught fish averaging 3 lbs. Unfortunately logs and rafts start coming down from November and the fish are then very shy.

Towards the end of Sept. 1957, I visited this junction with my son David who caught an 18 lb. Mahseer on a $7\frac{1}{2}$ lb. line with a Shakespear reel. I caught three fish on the same day—22 lbs., 17 lbs. and 12 lbs.

In September 1958, I caught two fish 37 lbs. and 9 lbs. and my wife caught a 12 lb. Golden Mahseer.

In October 1959, I had the great fortune to beat my record with a catch of five fish—total $177\frac{1}{2}$ lbs. in a week.

Below I give details and dates. The largest fish, a 55 lb. mahseer was recorded as the record for the Tons and Jamuna in the Doon Valley—at Choharpur Range Office on the 8th October 1959—caught on plug with 13 lbs. line. A photograph of the fish accompanies this article.

Time	20 minutes		
Weight	55 lbs.		
Length	55 inches.		
Girth	27 inches.		
2nd Oct.	18 lbs.	} Two.	
	25 lbs.		
4th Oct.	44 $\frac{1}{2}$ lbs.	One.	
8th Oct.	55 lbs.	One.	
9th Oct.	35 lbs.	One.	
Total	177 $\frac{1}{2}$ lbs.		

In May and June of 1960, we fished the same junction for six days, each day from 7 a.m. to 9 a.m. and never did we have a dull day. We caught three types of fish—Mahseer, Indian Trout & Kala Banse; the Kala Banse taking fly spoon readily. The largest fish, a 26 lb. Mahseer was caught by my driver Shri M. B. Thapa, a keen angler, and the second largest, a 20 lb. Mahseer, was taken by my wife on a No. 1 Luxor reel and $7\frac{1}{2}$ lbs. line. The rains broke in the first week of July and the rivers Tons and Jamuna became unfishable.

Now I must hang up my rods and grease my reels until October when I hope my health will again permit me the pleasure of meeting my old elusive friend Barbus-tor on his return trip to the plains.

There are various reasons as to why the fish do not remain at the Tons-Jamuna junction throughout the year.

(i) The Tons is a very cold river. Average Temperatures being as follows :—

February	50 degrees	} (7 A. M.)
May	52 „	
September	57 „	
October	58 „	
November	44 „	

(ii) Rafts and logs.

(iii) Bombing and Dynamiting.

(iv) Poisoning by Kunjas.

(v) Renting by the Panchayat.

Now we ask, 'where do the big fish go ?'

Let us hope that will remain a closed secret to the destroyer of fish, and that at least we can meet them in heavy water where they have a chance with the sportsman.

There are not enough (Rod and line) fishermen in India to-day. Fishing is a cheaper sport than shooting, and with the cost of ammunition as it is to-day a good reel and rod could be procured for the cost of 300 rounds. There is no sport in the world to better Mahseer fishing, and the Doon Valley offers some of the finest fishing in India. Finally I would ask, what better way could one spend a holiday than in pursuit of the Mahseer !

For the benefit of persons planning a fishing trip to Dehra Dun, I give below in tabulated form, details of fishing localities in and near the Doon Valley. The places shown have ideal camping grounds, and most have bungalows. The best period for fishing shown in the table is based on my own experience and the results I have had.

<i>Location.</i>	<i>Miles from D. Dun approx.</i>	<i>Best months</i>	<i>Rest Houses</i>	<i>Rivers</i>
Lachiwala	12 miles.	Sept. & Oct.	Yes	Song
Kansrao	20 „	Aug. & Sept.	Yes	Song & Susua
Satyanarain	36 „	June, Sept. & Oct.	Yes	Song & Susua
Raiwala	39 „	Nov., Jan. & Feb.	Yes	Ganges
Kalsi	32 „	May & June.		
		Oct. & Nov.	Yes	Tons & Jumna
Rampur Mandi	26 „	Oct. & Nov.	Yes	Jumna
Kul-hal	26 „	May, June & Oct.	Good Camping	
		Nov. & Feb.	ground	Jumna
Kara	40 „	May, Nov. & Feb.	Yes	Jumna
Tajewala	46 „	May, Nov. & Feb.	Yes	Jumna

E. G. Mainwaring.

The Motor Car Poacher.

Perhaps, the worst enemy of our game to-day is the motor car poacher. Unlike the poacher on foot, he is able to cover a wider area and in consequence causes much more destruction. Again, unlike the foot poacher the regular car poacher is a coward who dislikes setting foot in the jungle and does all his shikar, about which he boasts so much, from the security of a motor vehicle. For every animal he picks up, he leaves behind many wounded to die a lingering death. There is nothing at all to be said in his favour. With Jeeps and other four wheeled vehicle, and with the opening up of new forest roads all over the country, the field of operation of this type of poacher has increased beyond comprehension. The sooner action is taken to eradicate this form of poaching the better it will be in the interests of wild life preservation.

Direct as well as indirect remedies are available.

As regards direct remedies legislation comes first. Shooting from motor vehicles should be made a punishable offence and penalty fixed high. The confiscation of the vehicle involved should be one of the penalties. It is extremely difficult to catch a poacher in the act of shooting from a motor vehicle, therefore there should be additional safeguards. Practically all this type of poaching is done at night and shooting at night except under certain conditions like sitting up over kills should be prohibited. Shooting at big game within 100 yards of a road or a cart track ought not to be allowed. So far as law is concerned a combination of these three measures would leave no loophole for a poacher to wriggle through, when caught.

Legislation alone is not everything. An enactment only defines an offence and provides for the punishment of an offender, *if caught*, and meanwhile slaughter of wild life continues. Along with legislation steps ought to be taken to prevent the commission of offences. This is possible by denying the poacher access to the area of operation or by keeping a check on his activities whilst he is there, by erecting anti-poaching gates, barricading suitable forest roads at points of entry and exit. The Nilgiri Game Association has been operating two such gates, covering the approaches to the Anaikatti area, with great success. Every vehicle entering and leaving that area is stopped and checked and particulars of the vehicle, arms, licences, bag etc. therein are entered in a book kept by the watcher for that purpose before it is allowed to proceed further. Such gates would also help to keep a check on timber movements and serve a dual purpose. They could be introduced in other suitable localities, but care must be taken to choose a proper site. To cut costs regular forest guards and

watchers could be employed to man anti-poaching gates at night on a part time basis on a small additional remuneration.

As regards indirect remedies, the greatest drawback in official planning for wild life preservation is the tendency to ignore the sporting public, the only members of the public who take any practical interest in wild life preservation. In many official circles the sportsman is treated on a par with the poacher and this greatly discourages sportsmen, who out of sheer disgust, cease to take any interest in wild life preservation, and in some cases even turn poachers. As a result of such short sighted policy the co-operation of the stoutest champions of wild life preservation is lost.

To give an instance, motor car poaching is comparatively scarce in the Nilgiris mainly because of the existence of the Nilgiri Game Association, through which the sporting public are associated in wild life preservation. Even if there are motor car poachers they do not brag about their exploits openly, as they do in the neighbouring districts, for the shame of it and for fear of being ostracized by sportsmen.

Several poaching offences go unreported mainly because no incentive is offered to the underpaid and over-worked subordinate forest staff to report cases. They do not even get a "thank you" for detecting even difficult cases involving risk to life. To encourage subordinate forest staff to detect poaching cases provision must be made for payment of handsome rewards. By offering rewards the Nilgiri Game Association is able to detect several poaching cases which would otherwise go undetected.

If these measures are introduced without further loss of time it is possible to bring motor car poaching, which is now rampant, under control.

E.R.C. Davidar,
Honorary Superintendent,
Nilgiri Game Association.

Conservation of Wild Life

By HIS HIGHNESS SRI JAYA CHAMARAJA WADIYAR, G.C.B., G.C.S.I., D. LIT., LL.D.
MAHARAJA OF MYSORE

The cause of forestry and of the denizens of the forest has always been uppermost in my mind. Nurtured in a culture and philosophy that draws its springs from the Rishis who were forest-dwellers, and brought up in a part of India abounding in hill and dale, mountain and valley, rushing streams, variegated landscape, the tiger, the elephant, the bison, not to speak of the birds clad in tropical magnificence, I know something of the value of forests and their impact upon civilization. To the people of India forests are not merely sources of material wealth. They are their spiritual homes. The Vedic culture which we have inherited arose full-blown as it were from the forests. There the sages sang their immortal hymns and speculated upon the meaning and purpose of existence. In the Puranas there are constant references to the merit earned by planting trees and conserving forests. In our religious background there are many forest scenes such as the Brindavan of Lord Krishna, the Dandakaranya of Rama's exile and the sylvan asramas of the Rishis.

Bhagiratha was the divinely appointed irrigator who brought the Ganga from God Siva. Siva's disciple was Nandi, the divine bull. The sacred Kamadhenu was the cow of plenty. Sita is the daughter of the furrow and Baladeva the lord of the plough. Mahavaraha, the Boar, lifted up and transformed the earth. These are names which recount and revive memories of long ago, embedded as they are in national consciousness.

Life on the globe depends upon Nature: the abundance and plenitude of Nature as well as its proper and economical utilization. Man forms an integral part of Nature along with soil, water, animals and plants. With the advance of civilization, however, much of nature's fine equilibrium has been upset by man's wantonness. The reduction of forest areas produces disastrous results. Sometimes river banks are cut into ravines; sometimes the river dries up, or soil is brought up to obstruct the free flow of water and alter its course or create swamps. Fertile tracts become desert. Soil erosion and decline of rainfall follow the ruthless denudation of the world's wooded areas.

'Protection of Nature' means the conservation and wise use of the entire world biotic community, or of man's natural environment, which includes the renewable natural resources of which the earth is composed, and on which rests human civilization.

The greatest of the problems is soil erosion. Day by day, millions of acres of fertile and cultivable land are robbed of the topmost layer of soil which is washed down to the sea or

the lakes. It has now been established that the tropical soil, at one time considered so rich, has very little humus, and to disturb it too much will result in creating fresh problems. It is said that many tropical soils have low humus content and bad structure. Because of high temperatures, chemical decomposition and bacterial activity is speeded up and instead of humus forming, the organic material is rapidly decomposing and being washed through the soil to great depths by heavy rainfall. This process is called leaching. It is said tropical soils contain 1.8% humus, whereas in the temperate zone it is 10%. The problem in the tropics is that nitrogen is formed too quickly and lost too soon; in the temperate zone it is not formed quickly enough. For soils to be rich the following are necessary: (a) the chemical enrichment provided by rotting vegetation and undergrowth, (b) the restraint of leaching and water percolation by good vegetative cover, (c) lower temperatures to slow down bacterial activity and lessen evaporation. Tropical soils suffer from laterization as well as leaching and low humus content. Therefore most tropical forest soils are very poor and if cultivated for a period of one to seven years need from 10 to 50 years to recuperate. Productivity falls and the gap between the feeding mouths and production in the grain fields is steadily widened. The ruthless and rapid denudation of forests to make room for cultivation and to meet the uses of modern industry and the demands of daily life, without a corresponding development of fresh forest areas, has brought some countries perilously close to becoming a desert.

Another problem is presented in the imbalance of nature in the field of fauna. Wild animals leave jungles and seek their prey in cultivated lands and villages and near towns. Colossal loss of human food is caused by creatures like wild boar, deer and monkeys, which destroy man's smiling fields and rich gardens. This is largely because man has encroached upon their preserves. The animals can hardly be blamed; having lost their usual feeding grounds in the forest, they must either raid the crops or starve. Again, valuable varieties of human food in the shape of fish are fast disappearing because of unscientific methods, and of over-exploitation. Finally, valuable species of plants, serving innumerable human needs, are becoming extinct. Industrial extraction of timber, clearing of lands for extensive farming, the removal of trees by individual farmers for small profits, all these have to be carefully controlled. Saner methods of using nature's bounties have to be practised.

Speaking particularly of conditions in India, we have all the major problems threatening us as indicated above, some of them in a very acute form. As against the average minimum requirements of forest which is $33\frac{1}{3}\%$ we have less than 18% of it. Even this area is being reduced at a rapid rate.

The precious heritage of India's wild life is fast becoming a vanishing asset and some of our notable animals, e.g., the lion, the one-horned and two-horned rhinoceros, the pink-headed duck, bison, the wild ass, the great Indian bustard, the monal and tragapon pheasants,

the brow-antlered deer, serao, thakin, cheetah, etc., are on the verge of extinction. The advent of modern weapons of destruction, coupled with a callous disregard for the animals that we have inherited as a sacred trust, has further worsened the situation. It need scarcely be emphasized that the management of wild life envisages not only its preservation, but also its control. Predators like wild boars, porcupines, wild dogs and crocodiles are to be kept in check and vermin and other injurious species are to be destroyed. Wild animals which menace crops have to be kept away. We may not, however, disturb the balance of nature with impunity. With their natural prey decimated, carnivora perforce turn to cattle-lifting. The recent scare caused by the visitation of hyenas, panthers and wolves around Lucknow, Delhi and other large cities is illustrative of how wholesale destruction of game can drive carnivora to adopt desperate means to subsist. Even domesticated animals could be destructive of plant wealth. Uncontrolled goat-rearing is a threat to plantations; and, to get the best return for fodder, it is essential to raise the economic quality of the cattle.

Game Sanctuaries and National Preserves are receiving the increasing attention of the authorities in India. The need is for their expansion and development on the lines of the National Parks in the Belgian Congo and the United States of America, and their maintenance on a really scientific basis.

In the successful solution of economic and social problems the balance of nature has a very vital role. Every one should be helped to realize the purpose and utility of the fauna and flora of a country. Success will depend on the active efforts of the International Union for the Protection of Nature, the Government of India, Government of States, the Central Board of Wild Life and enthusiastic sportsmen and naturalists in this regard. Governments and organizations interested in the conservation of renewable natural resources, large industries dealing with forests, plantation, agriculture, fishing and the like, would do well to become active members and profit by the expert advice and information offered by the I.U.P.N.

Mere laws on the statute book will not help much unless the public co-operate in the matter. The idea that game is legitimate food for human beings has to be gradually abandoned. Educated men have to undertake the onerous task of instilling in the minds of the general public an interest in the preservation of wild life. They have to explain the dire consequence of any species becoming extinct; the killing of kites and peacocks may increase reptiles and the destruction of smaller birds may help the multiplication of the locusts which are becoming a regular menace to cultivation. The firmly rooted conviction in the minds of the peasants that wild animals are enemies of cultivation and every means for their destruction is justified has to be gradually removed. A love for animals and birds has to be inculcated in the minds of the younger generation. Small primers with brief descriptions of animals of

some of the important species, supported by attractive coloured pictures, may be introduced in schools.

When the world was young and the influence of man on other animals was negligible there appears to have been a better variety and greater number of animals well distributed over all the zones of the world. In geological ages mammoths and monsters like Dinosaurs, Unicorns, Mastodons, etc., became extinct. Owing to the increase in human population and consequent interference, and also because of volcanic actions and other upheavals, the balance in nature was upset. On account of the changes in environment and in conditions of life many varieties of animals disappeared from the earth and the survivors took shelter in quiet corners, mostly in the luxuriant vegetation of the tropics. Every decade registers diminution in the numbers of wild animals and the extinction of some particular species. Once a species is threatened with extinction it is very difficult, if not impossible, to rehabilitate it. In the face of modern weapons of killing there is little chance of survival for any kind of animal unless restraint is enforced.

The problem of the protection of Nature was felt even in early days in India. There are many significant passages in Kautilya's *Arthashastra* to show the importance attached to conservation as long ago as the fourth century B.C. In the chapter on the duties of a Government Superintendent, it is stated that 'he shall not only clear roads of traffic but keep in good repair timber and elephant forests and buildings and mines created in the past, but also set up new ones.' The need for the protection of both animal and plant life was felt in those early days and necessary provision was made for ensuring their safety. Something like the National Parks of the present day were established. They were called *Abhayavanas* or *Abhayaranyas*.

The idea of preservation and game-laws is not foreign to the genius of the Aryans. The regulation of the bag and other conventions of the chase found a place in their policy. They were strictly observed more as religious mandates than as ordinary laws. Even ruling kings were not above them. We read in the *Ramayana* and the *Mahabharata* how King Dasaratha and King Pandu were cursed for shooting by sound and shooting during the rutting season respectively. We can infer from the *Mahabharata* how a hunter could without sin kill with his forked stick enough game for the sustenance of his parents and himself. The precincts of hermitages acted as little sanctuaries in which every kind of life—man, beast or bird—was inviolable. Kalidasa's *Sakuntalam* contains a description of the sage Kanva's asrama where even traditional foes among animals, like the tiger and the deer; lived in peace together.

Many of the principal species of animals and birds were worshipped as *Devas* and their destruction was automatically prohibited in consequence, for example, the elephant as Ganesa,

the bear as Jambuvan, the cow as Kamadhenu, the bull as Nandi, the monkey as Hanuman, the boar as Varaha, etc.

In early ages all parts of the world were teeming with wild life. We should now ask ourselves whether the uncountable herds of elephants in the veldts of Africa and the millions of bison in the prairies of America could ever be brought back. The elephants were butchered by the avarice of the ivory-hunters and the bison by that of the hide-seekers. The Asiatic lion—the numbered few in the Gir forest of Junagadh—if shot out will become extinct like the Dodo. Strict laws to preserve the surviving animals in their natural haunts have to be enforced, otherwise we will be failing in our duty to nature and to posterity.

Even in tribal life certain animals and birds and plants received a measure of protection through taboos and totems. Thus certain plants and trees were exempt from the axe and certain animals were spared. The conspicuous survival of shady trees like the peepal, neem and banyan, of the greatest use in a hot country, can be explained by this. The aridity of the Palestine region was in a great measure due to the heavy logging operations and grazing on the Lebanon. This gradually affected animal life and depleted it. The Lord had to speak to Moses and Aron prescribing 'the beasts which ye shall eat among all the beasts that are on the earth.' Again the Lord enjoined on Moses that 'the seventh day shall be a sabbath of rest unto the land, thou shalt neither sow thy field nor prune thy vineyard.' The need for allowing the land to lie fallow and recuperate was recognized.

King Artaxerxes appears to have had a forest superintendent. Nehemiah refers to a letter 'unto Asaph, the keeper of the king's forest' that he may give timber. But wasteful demands on the forest resources proved fatal in the long run. 'The earth mourned and languished. Lebanon is ashamed and shorn down. Sharon is like a wilderness' complains Isaiah. 'He hath turned the rivers into a wilderness, a fruitful land into barrenness for the wickedness of them that dwell therein.'

A national park has as its main object the preservation of wild life, while the preservation of other objects of interest and benefit to the nation is secondary. A national reserve is a term which denotes an area where the ordinary and reasonable needs of the animal inhabitants living within the area take precedence. It is a compromise between a national park and a game reserve.

The need for preservation has been felt and met with varying degrees of efficiency in different parts of the world. In several countries considerable progress has been made in this direction. The Kruger National Park, the parks and reserves in Kenya, Natal, Jamaica, Ghana, Australia and the United States of America and the steps being taken in India and

Ceylon testify to the growing recognition of the need for protection of nature felt in many lands.

The U.S.A. has been a pioneer in conservation. The national parks are specially valued as remnants of the great virgin forests of the past. In the Yellowstone National Park, for example, careful protective measures have insured the survival of the once-vanishing species of the bison.

If timber utilization is economized, wild life would greatly benefit. Massive extraction of timber from the Western Ghats has upset the rainfall chart of the west coast of India affecting both surface and subsoil drainage and disturbing the very pattern of agriculture.

Disafforestation and desiccation have during the last 2,000 years totally changed the face of the Bharatpur-Agra-Mathura region of North India from a sylvan to a semi-desert area. Sand dunes and ravines are now to be seen where there was once thick jungle and lakes. The fauna has also consequently changed. Measures of rehabilitation are now being undertaken by the Government of India; for instance, a second home has now been provided for the lion in Uttar Pradesh. A National Forest Policy was inaugurated in India ten years ago and it has begun to yield substantial results.

In olden days there were certain natural factors which prevented too deep an invasion of man into nature's strongholds. Malarial and blackwater belts, thick undergrowth, ramparts of trees and the natural physiographic barriers afforded a degree of protection to nature. But in our days D.D.T., dynamite, bulldozers and jeeps, rifles and safaris have overcome these defences.

The wild life in any country is a national asset. Like forests it cannot be owned or preserved by individuals as there are no immediate returns or perceptible results. Co-operation of major powers was necessary to prevent extinction of certain species. A world conference was convened in pre-war times for the preservation of wild life. Many leading countries have formed wild life parks such as the Kruger Park in Africa and the National Parks in America. Following their lead, the Pidaung Sanctuary in Upper Burma, the Manas in Assam on the borders of Bhutan and the preserves in the former United Provinces of Agra and Oudh were opened. Nearer Mysore, Travancore developed the Peeremade Sanctuary in which visitors could go about in boats observing game in their natural haunts without disturbing them. That India was not far behind any of the progressive countries of the world in taking measures for the protection of game can be seen well in the steps taken in the old State of Mysore. The Game Regulation was passed as early as 1901 to prevent the indiscriminate destruction of wild animals and birds and to provide for the protection of game and fish. A Sanctuary extending over 35 square miles was notified in Chamarajanagar forest in

1931 and maintained nearly for ten years. Experience showed that this area was not enough to hold all the species of Mysore wild life. Taking advantage of the formation of a sanctuary by the Madras Government adjoining our forests on the Nilgiri frontier, the more ambitious scheme of the Venugopal Wild Life Park extending over 310 square miles, with a sanctum of about 22 square miles within the Park, was started during February 1941. Another Park in the north-western region of Mysore called the "Muthodi Wild Life Sanctuary" with an area of 68.11 square miles was formed during the same year and both are maintained to preserve the representatives of existing species.

Roads have been opened connecting almost all the grazing grounds, watering places or salt licks, etc., in Venugopal Park in order to observe game in their natural surroundings without unduly disturbing them. The increase in the number of game in the course of about ten years was phenomenal. Most of the animals had got accustomed to motor cars, and bison could be seen grazing within two yards of a moving car. But during the years of World War II in which the Military were camping in Beeramboddy Forest in the neighbourhood for practice of jungle warfare the game got disturbed and in some places were even shot for beef and venison. If the present fresh water sources are improved there is a good chance of keeping the game in our limits throughout the year, and preventing them from migrating to the upper slopes of Anamalai and Mudumalai hills during the summer season.

If one is lucky one may see deer, bison, panther, tiger, elephant, bear, boar, mousedeer, etc., without stepping out of the car. There is no other place in India where game can be seen in their natural habitat with equal ease.

Lions used to be abundant in Northern India in the past and were present in the country far earlier than the tiger, which is comparatively a late-comer from Central Asia. The lions have now largely disappeared save in a protected area in the Gir forests. In 1822 they were in considerable numbers in Saharanpur and North Rohilkhand. In 1830 they were seen in the Mount Abu and Sabarmati regions. Soon the guns were trained on the lions. Poaching and uncontrolled shooting greatly depleted their number. The situation became so alarming that on a report from Mr. Wellinger, District Forest Officer, Junagadh State, in 1913, that there were only 6 to 8 lions left in an area of 700 square miles, Mr. Rendall, the Administrator, to whom all India must be ever grateful, imposed a total ban on lion-shooting. The 1936 census showed a total count of 287 lions in the region. Even controlled shooting is now permitted rarely, and the rules are rigid. No lioness or cubs may be shot.

A good amount of planning and scientific attention is necessary in setting up parks, reserves, and sanctuaries. The area has to be selected, the conflicting claims of man and animal have to be reconciled, scientific care of wild life has to be taken, proper trained

personnel found and reasonable arrangements made to give facilities for visitors to observe wild life.

In the difficulties in which the world is engrossed today we have forgotten to pay sufficient attention to the protection of Nature. We seem to have little time to consider the fundamental problems that confront us in the field of Nature, on which we must depend for our sustenance. Food scarcity, economic depression, political uncertainty and other such problems claim the attention of peoples and governments and not much thought is given to the maintenance of the balance of Nature.

Let us remind ourselves of the famous words of what has been called the 'Eleventh Commandment':

'Thou shalt inherit the holy earth as a faithful steward, conserving its resources and productivity, from generation to generation. Thou shalt safeguard thy fields from soil erosion, thy forests from desolation and protect thy hills from overgrazing by herds, that thy descendants may have abundance for ever. If any shall fail in this stewardship of the land, the fruitful field shall become sterile, stony ground or wasting gullies, and thy descendants shall decrease and live in poverty or perish from off the face of the earth.'*

* Walter Clay Lowdermilk : *Palestine—Land of Promise*.

The Black Buck of Point Calimere

"The Kodaikaddu Reserved forest is situated just above Point Calimere in Tanjore district and covers an area of about 3000 acres. The forest growth is mainly jungle shrubs with some trees here and there. Till 1957 this forest was in charge of the Revenue department, and the Revenue Divisional Officer, Mannargudi was the ex-officio District Forest Officer under the direct control of the Conservator of Forests at Coimbatore. There are no wild animals in the forest except for a large number of black-buck living in herds in the areas close to the sea coast, covering about 3 square miles from the forest bungalow to the light house. There are also a good number of spotted deer which are under threat of extinction by poachers, who indiscriminately shoot these animals for their skins. However, the black-buck do not attract the attention of the poachers too much, and they roam about unafraid of human beings along the long sea coast. Two decades ago there were a fairly good number of ponies found in this forest, which animals, though they were born and bred in natural conditions in the forest area were claimed as privately owned by influential persons living round about. There were also some herds of semi-wild cattle and these also had private claimants.

The forest was for the first time connected by railway during 1936, and till then access to the areas was not easy as a salt swamp had to be traversed beyond Agastiampalli. Only pilgrims going to a sacred place known as 'Ramar Padam' at the entrance to the forest area from Vedaraniyam, and pilgrims going for baths to a sacred spot on the Point Calimere coast had occasion to pass through the forest area. During the second world war a radar station was constructed at Point Calimere, close to the forest rest house, and army personnel who were stationed at the place had unquestioned access to the forest, and for the first time the animals living there had a shock and were scared away. Soon afterwards the Government took up a programme of growing casuarina in the forest area and this work, which was first taken up during 1943 as an experimental measure, was extended and most of the forest area was destroyed for the casuarina plantation. This casuarina plantation scheme proved fatal to the animals in the forest area and most of the animals disappeared in recent years inspite of the total prohibition of shooting in this forest. Twenty five years ago only Hindu pilgrims visited the forest and except for camps of some European Collectors and other high officials during the Christmas holidays in the forest rest house for a few days, there was no disturbance to the animals of this forest. Of course there were casualties among the young animals by jackals, but these casualties were negligible. The original forest growth was congenial for these animals, and they seemed to thrive in their old surroundings. To have substituted the natural vegetation with casuarina has proved fatal to the survival of the beautiful animals that gave pleasure to thousands and thousands of Hindu pilgrims who visited the area."

NOTE

The above graphic description of Vedaranyam sanctuary of Tanjore in South India was given to me by a retired tehsildar who had been posted there for many years, and whom I met by accident.

Point Calimere is a promontory on the east coast of southern India in the Tanjore district, and points towards the northern tip of Ceylon. The actual sanctuary area is on the sea-coast. The vegetation is dry thorn-scrub with a peculiar form of herbage and grass growing on the exposed flats and margins of the marshy depressions. The area is exposed to storms and cyclones which sweep the coast and which decimate the black-buck. At times these animals are stated to swim out to near-by islands, though the absence of the black-buck in Ceylon proper would appear to indicate their inability to swim great distances.

I had long heard of the famous (and by present-day standards, fabulous) concentrations of black-buck at Point Calimere and I seized the opportunity to visit the area in continuation of one of my tours in 1959. The local D.F.O., Thyagrajan, was a very keen wild-life man, and he very kindly showed me around. I had taken along a telephoto camera, with which I hoped to get some good pictures of the black-buck herds, but unfortunately, and probably because the weather conditions were un-favourable (dull and cloudy) not many animals were about. We must have seen about a dozen groups of black-buck of about ten to twenty animals each and a few smaller groups of three to five. The darker-coloured males seemed extraordinarily few and most of the males, which must have constituted about half the numbers, were young buck. The animals were surprisingly shy and would not allow an approach to less than a hundred yards. The weather was not at all favourable for photography, and it was difficult to 'line up' the animals against the flat landscape. In places the black-buck were feeding on almost invisible vegetation within reach of the sea.

We saw three wild pigs and several semi-wild ponies and cattle. It was interesting to see all these animals grazing together. Ground game was represented by the grey partridge, of which there was apparently plenty, and the black-naped hare. I understand that cheetal are also fairly plentiful, but we could not see any in the four hours we spent in the area. Two jackals were seen, and I was told that they are destructive of the young of black-buck. The wild pig also eat the new born foetuses.

The most significant thing in this area (where, I was given to understand, a ban on shooting has been in existence for the past 3 years) is the absence of a major predator, which probably accounts for the numbers of antelope said to be existing in the nine square miles of 'effective sanctuary'. In the absence of such 'natural regulators' the numbers are, however, being kept down by the peridical cyclones and floods which are stated to levy a heavy toll

when they do occur. If it were not for this the numbers would be so great as to threaten the available grazing. Even now there appear to be signs that the area is being over-grazed.

The local people are said to afford the black-buck protection of a religious nature, and the only threat is from poachers from distant towns. There are no fields in the neighbourhood to attract the animals and so from this angle also they are comparatively safe. Poaching has been, I am told, brought under control at present.

This, now unique, concentration of black-buck offers a valuable opportunity of building up an attraction for tourists, and of certain experiments in wild life management. The introduction of a predator, like the vanished cheetah of the Deccan, is one possibility. This animal has disappeared from India because of destruction of its natural habitat and of its prey, the black-buck. It could easily be re-introduced from Africa and indeed Vedaranyam could be made into a 'second home' for the cheetah. The introduction of other animals as could thrive here, such as the chinkara or ravine deer (which is a natural companion of the black-buck elsewhere) and of the Indian wild ass (whose habitat in the Rann of Cutch is similar) are other possibilities. At present, black-buck are being sent from this area to other sanctuaries in Madras. They are captured by driving the animals into the water of the flooded areas, when they are comparatively easy to handle.

But before anything like this is attempted, it will be necessary to correctly assess the number of individual species, and to ascertain whether the habitat is really capable of sustaining the numbers of herbivores at present existing, and extra populations of other species which may be successfully introduced. In this connection, statistics of body-weight, horn-size etc. are important, as well as indications of disease, as over-grazed habitats can be reflected in poor size both of body and horn and in diseased conditions.

What is required is a thorough census of the animals in Vedaranyam at an early date, and systematic attempts to collect data as suggested above. When this has been done and the picture is a little more clear, we can decide the next steps. This may well be the active control of numbers of the existing enemies of the black-buck, i.e. the pig and jackal. Indeed, the area offers scope for a wild life ecological study of a unique nature.

—P.D. Stracey.

The Game Laws of Maharashtra.

A REJOINDER.

In the October number of the Cheetal, I have read with interest Mr. M. A. Rashid's comments on the Game Laws of Bombay State. As one who has been associated with the Bombay Wild Animals and Wild Birds Protection Act of 1951 from the drafting stage, the suggestions for improvement and removal of defects and anomalies prompt me to make the following observations:—

1. In the Objects and Reasons to the Bill it was stated that it was proposed to appoint "an independent officer with necessary staff for seeing that the provisions of the Bill are properly implemented, as Forest Officers are fully engaged with their normal work and cannot find time for effectively undertaking this duty". In spite of these intentions it has unfortunately not been possible to find a suitable full-time officer and Forest Officers have held this post as stop-gaps for short and indefinite periods. This has prevented the bringing in of a new and independent outlook which was so necessary for this new effort. The staff for the administration of the Act is also insufficient, and, apart from the office personnel, the only additional assistance which the officer has received is from the Honorary Game Wardens. For the successful working of this project and for the realisation of positive results, it is essential that a whole-time officer with some background and knowledge of shikar, animals and birds should be in charge and that he should be free from the red-tape which necessarily governs the activities of all officers in all existing departments. At the moment the Wild Life Department is one of several under the Chief Conservator of Forests.

2. I do not think that any useful purpose would be served by having Circle-Licences. One important step forward has been the removal of the distinction between forest and non-forest lands. This facilitates the administration of the Act and the only point of Mr. Rashid's suggestion appears to be to reduce the fee. It is true that with the present restrictions on all deer and the relatively small chance of obtaining a tiger or panther, the Big Game licence fee of Rs. 60/- may appear excessive. The amount of big game left in the State is, however, very small and this is not the time to induce more people to shoot by lowering the fees.

3. When drafting the Act and the Rules, the fact uppermost in all minds was to protect the fast disappearing wild life. Under the conditions prevailing around Bombay, I do not think that it would be advisable to relax the Rules and permit the tying up of live bait. The number of tiger and panther left with us is very small and nowhere near enough to meet the requirements of every licensee. Decisions and statements of this kind are admittedly matters

of opinion and will continue to remain so until such time as some attempt has been made to count the number of animals existing in the State or country.

4. The exclusion of peafowl from the list of Small Game is due to curious circumstances. It is well known that peacock feathers are picked up in large quantities in Gujerat and Saurashtra and sold all over India for decorative and religious purposes. To avoid any clash with the working of the Game Rules, it was decided to exclude peacock tail feathers from its purview, and when a list of birds was submitted for the Small Game schedules, a mark was placed against the peacock so that the notification should be suitably worded and permit people without Game Licences to possess peacock feathers. This resulted in the item being completely dropped and subsequent efforts to reinstate it have not been successful. One group motivated by religious (?) sentiments is not willing to allow the export of dollar-earning peacock tail feathers on the plea that this business would lead to their slaughter and extinction. A peacock has less than 200 quills in its tail and it would be necessary to shoot at least 6 adult cocks (after ascertaining that their tails are not in moult) to earn Rs. 6 to 10 which are the prices at which the material is available in India today. Anybody who has any experience of shooting peafowl outside the provinces where they are held sacred and kept in semi-domesticated condition will realise how futile this search for riches would be. At its last meeting at Delhi in 1959, the Bird Wing of the Indian Board for Wild Life recommended that export of these feathers be allowed. The Board, however, without any satisfactory reasons being advanced or discussed negated the proposal.

5. I have never been able to understand why the Forest Department should have put in the clause requiring licence-holders to obtain the Divisional Forest Officer's permission before arranging for beats. Before this Act came into operation, such permission was apparently not necessary, and under the Forest Rules, which still operate unchanged, it is open to any Forest Officer to stop beating whenever and wherever he thinks that it would be harmful to his interests. This matter was considered at a meeting of the Bombay State Wild Life Advisory Board and it was decided that permission be obtained from the Range Forest Officer and in his absence the shikari had only to make a note that he was proceeding to beat in a specified area in a book to be retained for this purpose. This does not yet appear to have come into operation, though the Rules have been changed to the extent that the permission of the Range Forest Officer, instead of the D. F. O., should be obtained.

6. The reference to wild boar as "vermin" raises a very important issue regarding the latter term. I am now convinced that this word should have no place in any Act (at least in the present meaning) for the protection of wild life. The term is undoubtedly relative and what is vermin today at place A may not be so next year and may already be sedulously preserved at B. Section 50 provides that "the killing and capturing of any wild animal or wild

bird by the occupier of any land in defence of the standing crop or cattle on his land or in good faith in defence of himself or any other person" does not amount to contravention of the Act. This I think is more than sufficient to cover the various items sought to be classified as "vermin". As Mr. Rashid says, after its designation as "vermin", the pig has been wiped out from large areas and the pretext of destroying it has always provided an excellent excuse for people found wandering with guns but with no game licence of any sort. At an Advisory Board Meeting held on 21st September 1954, it was decided that pig should be removed from vermin and transferred to both Small and Big Game. No action has yet been taken, except that it has been notified that they may not be shot in Reserved Forests without the permission of the Forest Department.

7. It is true that most offenders against Bombay game laws have been let off with small fines, but the continued threat of a cancellation of the Arms Licence, has I think a very deterrent effect. In many of the Courts the Magistrate has no knowledge of legislation for the protection of birds and animals and handles it in the same way as a charge for blowing a horn in a silence zone or parking on the wrong side. When his attention is drawn to the high penalty of Rs. 500/- or six months or both, he is sometimes led to take notice—but this is effective only when the next case comes before him. It would be difficult to prescribe a minimum penalty, but more intensive advertisement of the value of our wild life would certainly get the Magistrates to realise the point of having provided high penalties.

8. There is no doubt that guns issued for crop protection have been among the most destructive forces operating against wild life in recent years. No definite figures are available, but I was informed that in 1947 the total number of Arms Licences in the then existing Bombay State was 70,000, of which 50,000 were issued for self protection and sport and 20,000 for crop protection. About 1954 the total had increased to 1,20,000, the addition being made up almost entirely of crop protection guns. It should be particularly noted that less than 1% of the 1,20,000 Arms Licences buy annual game licences and it is extremely unlikely that the remaining 99% do not use their weapons.

Even if it is not possible to call in and retain all crop-protection guns during the non-crop season there are practical methods of sealing such guns. Rules should be made whereby it will be necessary for such licensees to produce their guns at police stations immediately on termination of the crop season and to have them sealed. In the non-crop season it would be an offence to have an unsealed crop-protection gun and some apparently workable schemes were forwarded both to the Government of Bombay and the Indian Board for Wild Life. The latter is entirely of an advisory capacity and is not in a position to set any definite lead. Bombay unfortunately has not yet done anything, but it is hoped that some definite action will be taken as soon as the new political limits are determined.

Most of what I have said in reply to Mr. Rashid's comments is admittedly in defence of the legislation and its successful enforcement. There is no doubt that inspite of Wild Life Weeks and other Demonstrations of this nature, our wild life today is on the decline. The only hope for its survival lies with the shikaris who must join together in getting their Governments to adopt suitable legislation and then to administer it satisfactorily. True shikaris are the best game wardens.

Humayun Abdulali.

Our Projects and our Wild Life

BY M. KRISHNAN.

(Reprint by kind courtesy of the Editor "The Hindu Weekly Review")

A feature of our national development during the past decade has been the setting up of various hydro-electric and river-valley projects. "Setting up" is a weak and unworthy way of describing the triumphs over difficulties that had to be achieved before nature could be coaxed and coerced into aiding national progress. Being comprehensively ignorant of engineering, I have no proper appreciation of the magnitude of these achievements, but I am told it is considerable. Engineers, as all of us know, can do, and are doing, much towards the rebuilding of a better India.

However, they are not the only people whose skill is needed in this great reconstructive task, nor is it only technical knowledge that is needed—a deep knowledge of all things Indian is also essential, to preserve our national integrity. Moreover, engineers can be responsible for much unintended damage, too, when executing schemes spread over vast areas, with only the engineering problems, margins of safety, and the compensation of displaced owners computed with care. I must say I feel depressed at the needless destruction of forest and scrub in the neighbourhood of these huge projects. Naturally, a lot of clearing up has to be done before a dam or a power station can be built—roads have to be laid, and colonies constructed for the resident humanity of the place, and the project itself occupies considerable space. But all that does not justify the damage to the natural wealth of the area.

My object in writing this is to suggest that in planning these projects there is ample scope, now unsuspected for truly constructive collaboration between our engineers and those interested in the preservation of our wild life. Incidentally, the term 'wild life' does not indicate only the native fauna—it also includes the flora, which provides the animals with their natural and most beneficial setting, and which is by itself quite alive. The point needs to be stressed, because even our wild life preservers do not always realise that in any concept of wild life, the flora and fauna of a country are inseparable. And, unfortunately there is very little feeling for the magnificent flora of our country outside the botanical sections of colleges and Government surveys.

In the old days, too, great feats of engineering skill were achieved. The damming of rivers is not a modern idea. The Periyar dam, for example was built years ago, and is certainly a sizable project. But the men who executed that project did not think it necessary to cut down the forests in the area around. So far as my knowledge goes, they did not have a sanctuary in mind, but still they left the trees standing, even in the meandering valleys that would be permanently submerged and be turned into canals.

The result was a natural refuge for wild animals that only needed (and which still needs, I fear) the effective protection of its wild life against poachers to be one of the most picturesque sanctuaries in the world. It is not only the views of winding waters and wooded hillocks, and the herds of elephants seen from afar against a background so vast that the great beasts do not dominate the picture, that contribute to the panoramic charm of Periyar—the long-dead trees standing firm in the water, so pitted and scoured by their long immersion that one can guess their identities only by analytical means, transform the place into a scene from a fairy-tale.

Of course we need electric power everywhere, and the irrigation of broad tracts of flat country, to make life a little easier for our teeming millions. But is it sound national planning to formulate and execute major schemes without due consideration of their repercussions on the natural wealth and beauty, even the culture, of a country—particularly when most of our projects constitute, however unintentionally and however much by force of necessity, invasions of areas hitherto left more or less undisturbed? In our preoccupation with finding enough food and occupation for humanity are we not being somewhat deaf to the other crying needs of life? It is not right to so alter the appearance of the countryside that it is changed into something almost alien, and that is what is happening around many of our projects.

Entire hillsides, or miles of flat country, are denuded of all growth in the vicinity of these projects. I have watched this happening and know how it happens. It is not that the engineers are directly or solely responsible. Thousands of coolies and a regular army of

supervisors are needed for the construction of any project—the jungle and scrub around is the store of fuel for their cooking fires, the denizens of the area meat for their pots. A subsidiary but unsettled colony (a shifting and very shifty population) of trappers and poachers descends on the neighbourhood and does a thriving trade. By the time the dam or power station can be opened formally amidst cheers the wild life and jungles around have vanished.

I refrain from citing examples—a trend so generally observable at most of our 'plan projects' need not be particularised.

Nor is this all. After the project is completed and has begun to function, the hunting of the few animals still left in the neighbourhood is continued in the name of 'sport'. And all sorts of exotic plants are introduced into the locality, to reinvest it with verdure and 'beauty'. In this attempt to excel nature and re-endow the place with 'wild life', even large aviaries of assorted cagebirds have been thought of.

Nothing prevents the engineers in charge of a project from consulting those charged with the burden of preserving our wild life—after all, this entails taking no outsider into the confidence of a Government department because it is the forest departments of our Governments that are the official guardians of our wild life. There are Government-sponsored boards for wild life which will also be glad to help. By such collaboration the damage to the flora and fauna around can be prevented and with imaginative planning (to be more accurate, with conservative planning) the outer reaches of a project area can be made to provide the local wild life with a safe refuge, perhaps only a small sanctuary, but still serving a definite purpose and adding much to the interest of the place.

The absurd idea that many engineers seem to have that wild life around a project area is a big risk and a menace can be safely ignored. Where men leave them alone, the animals are only too glad to leave men alone.

Actually, the fringes of a project area often provide exceptionally favourable openings for such sanctuaries. As explained in a feature I wrote for *THE HINDU* years ago, in summer, when the animals are hardest up for fodder, *the receding water of a river-valley project exposes a widening belt of land with sufficient moisture for the growth of lush herbage*; furthermore, since a margin of dry land is always allowed for at the periphery of the water-spread when the water is highest at the dam, one of the greatest problems in the way of setting up a sanctuary in the plains, the finding of a site for it without sacrifice of agricultural land, is solved in part at least.

Naturally the situation, size and terrain of each project would offer different kinds of opportunities for sanctuaries in its purlieus. A river-valley project may provide scope for a

peripheral sanctuary of fairly large size, another may be able to offer only a nesting site for water-birds in a few acres, or a jungle-clad hillside against which the waters bank. The scope of each project needs to be studied with much forethought, and understanding of the ways of the local wild life.

The only general statement that can be made with certainty is this: it is far easier to trap or shoot down animals to the point of extinction in any area than to reintroduce them, far easier to cut down the native vegetation than regrow it. I do not know why it is so, but I know from observation over years that where the indigenous plants are undisturbed the exotics often find it difficult to establish themselves—cut down the native plants and disturb the soil (even if it is only the top soil) ever so slightly, and thereafter the exotics can, and will, crowd the original flora out of existence.

“Out-dated U.P. Shooting Rules Encourage Poaching”.

The permit holder of a shooting block is by far the most effective game warden, and the Forest Department should make sure that he is in the ground at all times. While this has been made possible in other States, the out-moded method of allotting shooting blocks in Uttar Pradesh not only discourages the sportsman but leaves the ground entirely open to the incursions of the poacher. Indeed, it drives some ‘would be’ permit holders into poaching. The loss of zamindari forests to all classes of sportsmen, particularly the man of moderate means, is another factor which makes revision of the forest rules all the more necessary.

Prior to independence a limited number of sportsmen normally applied for shooting blocks, and it was only a question of who would get which block. For the satisfaction of the applicant, that there had been no discrimination, a ‘draw’ was obviously the best method in those times, and because there were few applicants every one secured some block, good or bad. You were extremely unlucky if you did not draw even for second place in a block, and at all events you could reasonably look forward with hope to the next month’s draw. Now with the increasing number of applicants, and the still more rigid rules of the ‘draw’ of

only one block being allowed per application has resulted in many sportsmen not having drawn a block for the whole season. A keen sportsman cannot be expected to restrain himself to that extent, and now that he has no recourse to a Zamindar—who were very accommodating—he now finds his way into reserved forests to poach, while others gain entry by some subterfuge.

Certain blocks are not applied for at all as applicants being restricted to one block select the best, resulting in a great demand for the better blocks making it almost impossible to get one. Now, had an applicant known the futility of naming such a block it is likely that he may have applied for a less popular one. After the draw he may even be prepared to accept a poorer block for which there has been no demand at all, but having been ruled out of the block for which he had cast his lot he has to do without a block altogether, although some are available. On a number of occasions as much as a third of the total number of blocks in a Division of the U.P. have remained vacant. This has opened those vacant blocks to the poacher because there has been no sportsman on the ground to deter his activities.

If you have shot in a block often and have got to know the villagers they will tell you openly that as you have arrived they will not disturb the block *during your stay*. If you do not know the locals it is not uncommon to hear of them saying "Pass walla aya hai, khabardari sai". From this it should be quite obvious what happens when a block is allowed to remain vacant; what must happen during the closed period, when the locals know for certain that no one will be around, is left to your imagination.

The fortnight's rest period for animals was an excellent idea thirteen years ago when people were less prone to offend the Forest Laws, especially when sportsmen were around—probably some official, if not a Forest Officer. There were also fewer license holders to contend with. Now this is a period which gives '*carte-blanche*' to hundreds of blood-thirsty gun-men who have been waiting for it, when they know that there will be no pass holder, and that the Forest Department cannot be present in every forest. The Department has not the means to enforce the rest period under present conditions.

We must live up to the times, and in order to do this a revised system of allotment of shooting blocks should be introduced in Uttar Pradesh. Are we not free citizens, and have we not a right to satisfy our legitimate desires? We should, therefore, not be made to feel embittered with a Department of the State because it has not seen fit to modify out-lived rules which do not fit prevailing conditions, and do not cater for the average man. In order to keep the 'killer' and 'profiteer' out of the jungles, give *all* classes of sportsmen an opportunity to live nearer to nature, and so enlist their support in conserving our wild life. The shooting rules in other States suit present day requirements, but the U.P. rules are 'out of step'.

Some States allot shooting blocks, if vacant, for varying periods on an 'as required' basis, without any restriction with regard to the date or time of the month. Other States in the South work on a system of season's permit for the Division, or part of the Division, and which are not, as far as I know, restricted to any numbers, and it is fairly easy to get a permit. In Madhya Pradesh blocks are allotted for ten, twenty or thirty days for the dates for which any particular block is required; if the block is already booked, the applicant is given the option of selecting other dates. A refusal is unknown, and mostly only a slight adjustment in dates is required which leaves one in a happier frame of mind. There is less poaching in Madhya Pradesh as poachers are kept guessing all the time in case a block is occupied by some fearsome sportsman. Poachers also do not have a free run of the un-guarded forests for a known period of fifteen days in each month. Assam has the same arrangements, with the additional advantage of a belt of second class forests at cheap rates to suit all pockets.

The Madhya Pradesh Forest Staff and Guards have instructions to assist all sportsmen. To what extent the Forest staff do this is of little concern to most sportsmen who employ a shikari anyway, but it does establish a relationship of immense value between the Department and the individual. The Forest Guard is now welcomed into the inner circle and he has a better opportunity for closer vigilance on the conduct of the party. It has the effect of keeping the Forest Guard up to the mark in his duties, and enables him to get round to those parts which he would probably not see in the normal course.

The arrangements in Assam are by far the best as they cater for all classes of sportsmen. The individual who wants a variety of big game, and is prepared to pay for his sport is given the option of selecting the dates and place of his shoot, while the keen sportsman of moderate means who would like to shoot small and medium game is not entirely left out. The Assam Forest Department have done this by having first and second class forests. The first class forests are divided into blocks which are given out at the usual rates on an 'as required' basis, depending on availability of the blocks, and an option is given for selecting other dates. A royalty is levied for animals shot in these forests. The second class forests are given out at Rs. 20/- for the season, but no royalty is levied on animals shot. As both types of sportsmen have been accommodated the possibilities of illicit shooting has been greatly reduced.

It would be a simple matter to introduce the Assam system in Uttar Pradesh, particularly in respect of the creation of second class forests for the man in the street. After the abolition of zamindari we have fairly large areas of vested forests which could be converted into second class forests. There would be a considerable demand for permits from those who have no other option but to poach, and there would be an increase of revenue for the State. It would be necessary to impose a limit on all big game permitted in the season. Second class forests will solve the problem of individuals who have not been able to get a block, and

also those who cannot afford the present fee for a block. Neither of these two classes of individual are above poaching in the absence of Zamindari forests.

Along with the creation of second class forests the present blocks could be classed first class forests. Further, in order to accommodate the majority of sportsmen applying for blocks, and also to have a 'watch dog' in the forests all the time as a deterrent against poachers, these blocks should be allotted throughout the shooting season, not observing the fallacious rest period. The allotment should be so arranged that *all* blocks are occupied by sportsmen continuously. Returns will show that sportsmen seldom leave a block with anything like a bag, this is because every one is trying for a record head: There is, therefore, no risk of the depletion of game, on the other hand this occupation of the forest throughout the season will result in protecting game against the poacher.

Some shooting blocks are very extensive making the distant portions of it still open to poaching even when a sportsman is in occupation of the block. These blocks can conveniently be halved without fear of them being over-shot. Then again blocks like Timli East, Thano and Malhan in the Dehra Dun Division which are already divided up for the December shoots should now have each sub-division maintained separately as distinct blocks for allotment, along with other blocks which may have been halved.

As the Forest Department have *not* the means to enforce the observance of the rest period throughout the Division, it would be much more effective to have a few blocks of reduced size closed for the entire season. One block per every two Ranges would provide 'rest blocks' evenly distributed throughout the Division, where animals from all quarters could take refuge and breed undisturbed. Game staff must then be concentrated near these blocks, and the surrounding area must be actively patrolled by them.

Taking all matters into consideration, are we correct in limiting the chances of the working man from the field of sport, and is this in the larger interests of the country when it encourages and inculcates initiative, determination, courage and resourcefulness in the individual? Do the present arrangements in Uttar Pradesh adequately answer the requirements of sportsmen who are in a position to take a shooting block, and is it correct to restrict them? Can the present rules be applied to conditions existing now, or is some modification as embodied in the principles summarised below required:

- (a) The creation of first and second class forests for sport of all sections of the people.
- (b) First class forests to comprise the existing shooting blocks, further sub-divided to provide more blocks to meet the growing demand of the public and to avail of the services of the sportsman to the maximum as a deterrent against poaching.

(c) The present fallacious 'rest period' substituted with a rest period for the entire season confined to selected blocks evenly distributed throughout the Division, and PROPERLY SUPERVISED and patrolled by the Game Staff.

(d) The remaining blocks allocated to applicants on an 'as required' basis giving applicants the option of alternate dates when blocks are not available for the dates required, or the option of selecting another block. This latter option is even better for the purpose of having all blocks covered against the poacher.

(e) Assistance to sportsmen by the forest staff similar to the arrangements in Madhya Pradesh.

(f) Blocks in first class forests to be allotted at any time of the shooting season not exceeding fifteen days.

(g) The allotment of second class forests on a nominal fee for the season, with a limit on the numbers of the larger animals which may be shot.

These measures will be an effective remedy against poaching, and these poachers will become our best game wardens.

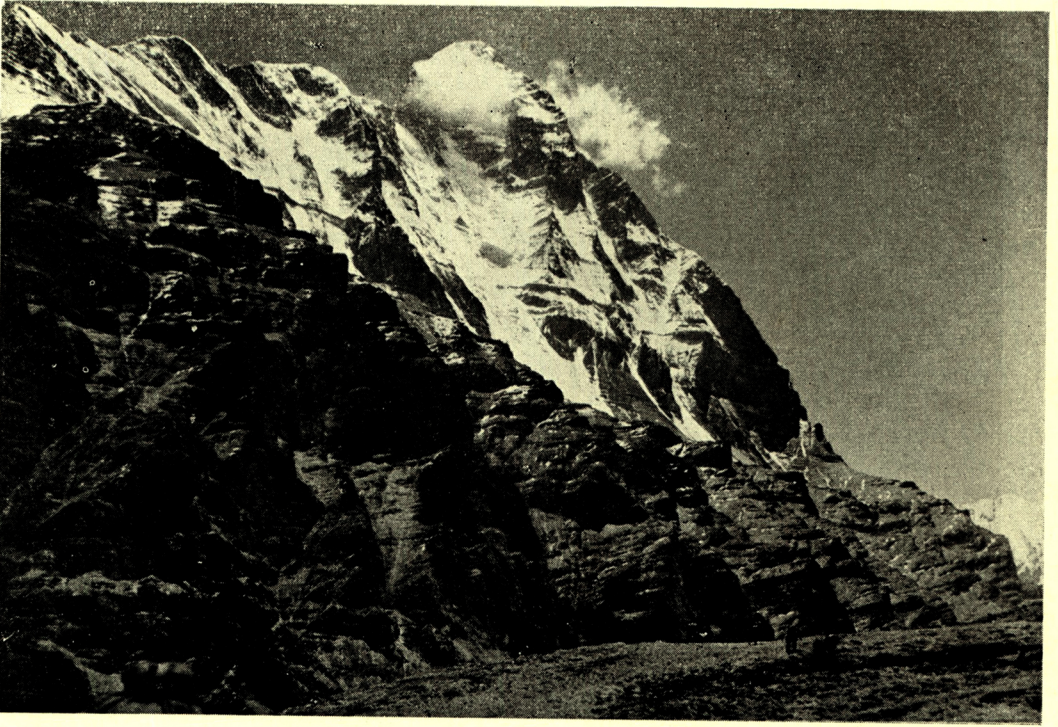
C.W.A.

Thar up a Chimney and a Burrhel Pastorale.

BY H. K. DANG.

Naturalists on the lookout for the rare and the exotic and, amateur shooters sated with the easy murders of a dozen tigers generally turn to mountain-fauna and meet their match in the wily and surefooted denizens of the High Himalayas. This has been so since the nineteenth century as even non-violent army-wallahs in India, glancing indolently at the trophies of Ibex and Markhor in their local Messes while twiddling the 'chhota' in their hands, can not have helped remarking.

But Markhor country almost entirely, and Ibex country to a great extent, has been lost to post-partition India, leaving us the somewhat less impressive Himalayan Blue Sheep (Burrhel) and the Himalayan Goat (Thar). The latter not to be confused with the small



Burrhel country in summer.



A magnificent Burrhel.



Ralam village--where Burrhel should have roamed.

mountain-goat, Ghooral, but only somewhat less impressive, for these two creatures are no mean adversaries as this account will show.

One autumn season I found myself at the Bhotia village of Mansiari on the Goriganga in Kumaon. Kesar Singh, my companion of three seasons, whom I had learned to love and respect as much for keen eye, tracking-power and acquaintance with the ways of the high hills, as for his homespun philosophisms about the world and human beings in general, joined me here, and taking one porter we set out for a two-month trip eventually involving the crossing of an unknown pass and the traversing of at least six glaciers to the east of Nanda Devi. It was on this trip that in one week I had the good-fortune of bagging a Thar, a Burrhel and a Ghooral, a quite unusual trilogy.

The Ralam Gad is a glacial torrent that joins the Goriganga a day's marching from Mansiari and some three days short of the last village of the valley, Milam, on the glacier of the same name. The Kala Baland, Yankcher and other glaciers which give rise to the Ralam are another six days from the confluence, and it was up the Ralam that we repaired, our immediate objective being Thar and Burrhel. The valley was narrow, the immediate slopes above the river being clothed in Spruce and Fir, Rhododendron and Birch, Berberis and Juniper, in that order. But above these relatively gentle slopes, the cliffs rose depressingly sheer, hemming us in on all sides. Occasionally we would catch glimpses of subsidiary glacial valleys, with snows at their head and Alpine meadowland and steep screes below and on either side.

Rajramba, a stream coming down from a mountain and glacier of that name attracted us as it was not visited even by shepherds; it has a pass on a side-ridge leading to the Panch Chuli group of unclimbed peaks. Kesar Singh was confident of both Thar and Burrhel here and we camped beside the snout of the glacier on a small alp, or grazing ground just below the Rajramba peak, which rose above us in a clean sweep of ice and rock to its jagged summit. I was glad we were not trying to climb Rajramba, though the sequel made the prospect appear almost welcome after our trying days. But I anticipate.

Up before the dawning is the rule for all Himalayan shikar, and KS (for so I called Kesar Singh. He had dubbed me what sounded like "Bap Shap" and refused to change!) opened the tent-flap at what seemed 1 a.m., with a mug of scalding, weak tea next day. I toyed with all the plausible excuses I could decently make for not getting out on an ill-advised chase after invisible Thar, but KS's earnest preparations prevailed, and we sighted three female Burrhel at about 10 a.m. after a three thousand foot climb to the crest of a rocky ridge which overlooked the screes of the glacier. They caught wind of us and strolled up the scree and across the ridge before I could fill my pipe. Following them seemed hopeless, and

the absence of any male made it unnecessary. But KS insisted that we climb on along the crest of the ridge, here overhanging the glacier's ice which had corroded into its base through slow aeons of time. It was almost evening when we again saw the same three female Burrhel, now across the glacier going up a steep snow slope. KS found a rock overhanging and had tea and sattu ready, the latter being our staple diet, ready-mixed from Delhi with sugar and powdered milk. We collected a heap of Juniper, for the forests were now far below us, and prepared to spend the night in the shelter of this 'udiar' or cave; this, incidentally, is the standard Bhotia home of the high hills.

Juniper burns green and gives a fragrant, if smoky, fire, but even a night-long fire can not prevent the autumn chill from reaching the marrow of one's bones at 17,000 feet without sleeping bags. So the morning found us cramped and eager to be moving. We crossed over to the other side of the ridge, well below the Sapa Dhura, the pass leading to the Panch Chuli group. It was KS who espied what he said was Thar across the ravine from where we stood, just below an overhanging chute or chimney. I could only see brown and black rocks !

Now a chimney is a steep crack in an otherwise steep and smooth rock-face; if water flows down it or it is wide, it can be called a chute, and these chutes, which often border glacial valleys in the Himalayas, are the favoured refuge of both Thar and Burrhel when they are either scared or satisfied with their pre-dawn and evening feeding excursions.

As is normal with these animals, whose hair hangs long and coarse down their sides, unlike the rich fur of the Burrhel, and whose male and female both sport horns, though the male's are upto 14" long, thick and serrated, while the female's are seldom over six inches and fairly smooth. We expected them to go up the chute as soon as they smelt danger. Leaving Pati Ram, the porter, behind, KS and I crossed the deep ravine, here full of old snow and ice. Asking KS to wait till he saw me detour around a far ridge to come out above the Thar, I resigned myself to a two-hour stalk.

Distances are extremely deceptive in the high hills because of the vast scale of the country, and it was almost three hours before I surmounted the wall of the chute below which the Thar were spotted, to find that KS had also climbed to the base of the gulley, and was signalling me that the creatures had ascended the gulley long ago. Such disappointments are not exceptional when Thar-shooting, and I waited till KS joined me, suggesting a return to our camp, for the prospect of another night out did not appeal to me. We decided to climb up a minor knob of rock which would give us a good view of the chute or gulley, for it could not be called a chimney technically, a swift, though small stream of icy water rushing down the middle of the smooth-worn rocks at its bottom.

We sat down on the knob to survey leisurely the barren defiles and crags above and below us. While KS smoked his 'biri' and spotted, I lay back to savour the smoke of content.

The next thing I knew was KS gesticulating frantically from a little way below to the effect that there was something under me. My first reaction was to try and get a view below, where the steep rock face overhung space. Realising that I would have to join KS to get a view, I clambered down to where he stood, only to see a herd of nine Thar, two magnificent males bringing up the rear, go ambling up the chute and disappear where it turned some thousand feet above us.

It is in such tantalising circumstances that most accidents occur, for we swore that, come what might, we would not return that night without a Thar. The chute became a real chimney as we climbed up it after the Thar, and we had to climb it with back and shoulders braced against one wall of the chimney, while we pressed against the other wall with our hands and feet. Every few feet the rifle, a .375 Mannlicher-Schonoer, clattered against the overhanging rock, almost upsetting me. The 'bed' of the chute was too narrow to permit the passage of a man, and the Mountain gods alone know how the Thar could have gone up it. This they apparently had, for we had heard an alarm call, a violent and resounding sneeze which echoed with frightening melancholy in the narrow confines. Occasionally a stone would come clattering down the chute, sending KS into paroxysms of ardent prayer to a thousand gods, and I would stick closer to the walls and close my eyes, for there was nothing we could do.

At last, after what seemed an eternity of rock and more rock, with here and there ice-glazed slabs, we began to see some light vertically above. Presuming it to be one of the terraces which generally lie above these chutes, we increased our pace and our optimism, for it was becoming quite frightening and we were afraid of being benighted in such surroundings.

"Bap Shap," "Bap Shap," K.S. suddenly whispered. Some two hundred yards vertically above us we could see one Thar after another go hurtling over and across the chimney up which we were climbing. They must have been on the ridge all the while, and now they had been properly scared by this persistent chase. An avalanche of stones came clattering and rumbling down the chute, and we extricated ourselves just in time. It was impossible to take careful aim for to all the difficulties of stones and ice was the added fact that the Thar were vertically above and gave a brief glimpse. I had seen the males bringing up the females, and sure enough, seven animals had gone over, leaving behind the two males. I adjusted the rifle to the gap which they would leap, and as the Thar appeared, hesitating to take the plunge

and perhaps curious at all the commotion, for the males are the least wary, I fired two rounds in quick succession, one as he was in the air.

He hit the rock-face once, and the next time he hit a rocky outcrop just above us, to go bouncing down the khud without any more contact with terra firms; a muffled thud told us that we would find him in the ravine crossed early that morning. We never saw signs of the ninth animal.

There remained the haul back to the camp on the alp, which we reached only late at night, staying up the whole night at our most pleasant labours, the consumption of the delicious, fatladen mutton. There were four courses, if I remember; roast liver and brain with tea, followed by clear soup, chappaties and mutton-curry, to be rounded off with Wild Rhubarb Fool, a sort of Rhubarb stew made with molasses.

SPARRING BURRHHEL.

It was three days before we found ourselves strolling past Ralam village, the last habitation of man in the Ralam valley, up level or gently sloping pasturelands leading to the Shankalpa or Ralam Glacier.

Above the rubble-covered snout of this glacier to the East is a vast mountainside of grass-covered scree, studded with Dwarf Rhododendron and a myriad flowers in springtime. This scrub-covered slope leads up to the snow-covered 17,500-foot-high Yankchar Pass leading beyond to the Ralam Pass and the Lissar Nadi. It was down this route that I was to come after a month, but at that time our programme had not even vaguely contemplated the exploration trip that was to follow.

We were camping on the west of the Shankalpa Glacier, and at dusk sighted a herd of some seventy Burrhel congregated on these screes on the opposite side. Such large herds are rare, though it is not unusual to see twenties and more in autumn.

After a night of revelry provoked, if not entirely, by supplies of Chang and Rakshi from Ralam village, we started across the glacier at 3 a.m., slithering and stumbling over morainic boulders and landslides. An efficient stalk was organised, Pati Ram going below and KS across the herd to drive it gently up towards the Yankchar Pass, where I was headed under cover of a shallow gully. For once everyone acted according to expectations and five males, two of whom had been sparring so gloriously while I watched from a mile above them that I wished I had a telephoto camera, climbed past me up a ridge with many a downward look. Burrhel pay for the huge weight of their bosus by being forced to go uphill to avoid being

unbalanced and stumbling downhill. This makes stalking them when once seen on open ground easier than it might have been.

The Burrhel which I dropped with the third shot was the biggest head I have yet collected and still graces my room, together with the Chimney-Thar. The memories of the shoot grace yet another, more personal room—and these won't tarnish or decay.

“ Tribal Hunting ”

An interesting topic of study to-day is the method of tribal hunting in India. We have heard of the bow and arrow used by many tribes in our country, but little is known of hunting without these weapons.

I was posted at Tamia, a tribal village situated in the interior of Madhya Pradesh in the Chindwara district. Dr. B.H. Mehta, Head of the Tribal Welfare Department, Tata Institute of Social Sciences, was my professor under whom I was conducting tribal research work. In the capacity of a Field Research Officer, I came in contact with many tribes scattered in the district. There were the colourful Gonds, Bhariyas and Ahirs. They lived happily together in remote areas in the forested countryside. For their livelihood they depended on agriculture and the wild animals of the forest. Clad in gaudy colours of bright red, green, yellow and purple costumes, the women unsophisticatedly carried out their daily routine in the fields and their homes; the men strong and sturdy, dressed adroitly in a turban and dhoti, helped in the fields. They hunted wild animals in their spare time.

The animals found in the forest are leopards, sambhar, wild boar, cheetal, kakkar, and tigers. These animals, excluding the tiger and panther, were hunted by them in small groups without the use of spears, bows and guns. A gun was usually used for killing a panther or a tiger when it lifted cattle. A muzzle loader is to be found in possession of nearly every headman of the village.

This method of tribal hunting caught my attention when I first came to Tamia, because I noticed that no weapon was used by them to hunt. On many occasions I heard of the

remarkable results the tribals had achieved: there were instances brought to my notice of a sambhar or a herd of wild boar being killed by them. One evening when I had nothing in particular to do, I was invited by a tribal to accompany them on their hunt, I needed no second invitation: I immediately jumped into the jeep and drove through the beautiful hills and valleys of Tamia to where a small village lay at the bottom of a steep hill; many tribals had gathered there. In their hands they held empty tins, sticks, Indian drums, tin plates and other articles. These were obviously to make noises in the forests so that the animals would move forward.

This particular hill which stood in front of the village was the hunting ground of the tribes. It ascended gradually from the village till it reached a high peak. The hill was triangular in shape, the base of which was the village. The wooded area was about a mile long and was covered with thick forest, impenetrable bamboo clumps, creepers and stunted bushes.

I was informed by a Tribal that this patch of forest held a herd of Sambhar. In order to hunt the deer the aborigines formed themselves in three groups. A party of about ten men advanced from the base while as many moved from the sides of the hill. To move them to the top the tribals, started beating the forest. They commenced by blowing the tribal horns, beating drums, rattling tins, and shouting at the top of their voices. Their voices echoed and re-echoed in the jungle. As the tribals penetrated deeper into the interior of the forest, the din increased. At constant intervals the shouting and yelling sounded and resounded in the forest, and these were followed by the beating of the drums and other paraphernalia. As the tribals advanced further into the forest, the birds fluttered in the trees and flew from one tree to the other; the rabbits vacated the bushes and ran about in the open. All this was sufficient to get their quarry on the move.

To bring the animals to their hunting ground, the tribals marched in a slow and methodical way. The distances maintained between the individuals was about 2 to 3 yards. As the aborigines started to climb the hill, the noise of instruments and shouts also increased. The line in the rear and flanks gradually closed. A stage was reached when the sambhar could neither run forward nor retreat. That was the climax of the situation.

A fall of about 200 feet lay from the top of the hill. This fall was vertical and of hard granite. No fragmented rocks or trees supported it, and the surface was smooth, slippery and shiny; though stray ferns covered it here and there. It was from this cliff that the aborigines intended the animals to fall to their death. They succeeded in bringing the animals successfully up to the peak of the hill but tremendous difficulty lay in getting them over the cliff. Many times the animals were brought to the edge but they either retreated

to some dense cover, or broke through running parallel to the cliff. This continued for quite sometime, and now the remaining animals cowered in dense cover here and there. The village dogs accompanying the aborigines on scenting the sambhar ran into the thickets after them. Their barks disturbed the animals who immediately came out of their hiding places. Immediately they were in the open, the tribals shouting and yelling rushed on them from all sides and succeeded in driving the animals over the cliff.

How many animals are killed in this way is not known to me. But this much is certain that the game in the Tamia Development Block is reducing in numbers rapidly. Unless this practice is stopped the animals in these parts will be cleared out completely.

S. Abel.

Religious Sentiment vis-a-vis Wild life Conservation.

By K. S. DHARMAKUMARSINHJI.

I have been prompted to write a brief note on this subject as I feel that some sportsmen do not have a clear picture of the management of Wild life in our Country. I have been reading with interest the number of views expressed by certain persons on the complete protection afforded by certain States of the Indian peafowl.

The Indian peafowl is normally a bird of the forest habitat and not of Alpine regions. Thus it is found in the plains and low hilly areas of India. Owing to the strong religious sentiment of the Hindu community in certain parts of Western India, the bird has enjoyed complete protection. As agriculture advanced and forests receded the peafowl adapted itself to more open country. However, so long as it was looked upon by the Hindus as a sacred bird its life was insured. The peafowl's association with man became intimate as was enjoyed by so many of our common birds. Therefore, to-day, the peafowl is common and widespread in the States of Rajasthan, North Bombay and West Madhya Pradesh. In districts where the religious sentiment is found lacking and where the bird is killed for meat, it is scarce even in its natural abode of thickly forested areas. The attack on the peafowl to permit its shooting is mostly carried out by the people who lack the orthodox Hindu religious sentiment and by those who do not visualise the true wild life situation. Whether such people

exist in majority or not has not been ascertained but it is a fact that wherever the peafowl hunter occurs, the bird is but common. A modern sportsman who has no religious scruples for game shooting would naturally feel he is deprived of shooting peafowl where the ban is placed on the bird. Modern wild life conservation would permit the shooting of the bird in areas where it thrived in abundance. But before this is emphasised the first point to consider is, whether Indian wild life conservation to-day has a sufficient strong hold over the protection of its game birds and animals. Strict laws are not being implemented and the Forest Departments have not been able to protect or preserve wild life as required under legislation. The chances therefore are that, once a bird or animal which is coveted by sportsmen is permitted to be destroyed even under a special permit and when there is no supervision over the number of birds bagged, resulting in the number of birds destroyed being not known, the controlling measure becomes ineffective. The rules framed for wild life protection which are not being enforced has to a major extent caused large number of game animals to have been decimated, though on paper the law has not allowed their destruction. The forest personnel is a well-knit administrative group which exercises its control on wild life in forest areas only. In the States of Rajasthan and North Bombay, the peafowl and Sarus cranes enjoy complete protection not so much because the Wild Life Protection Act imposes the restriction as much as by the wishes of the majority community giving effect to their religious sentiments. I cannot believe that the endemic Sarus crane would have survived the slaughter by sportsmen and meat-eating tribes had the moral sentiment been lacking and the law permitted the killing of the bird under the present system of wild life management. Look at the fate of the Great Indian Bustard! The peafowl and the Sarus crane are no doubt one of the most beautiful and handsomest birds of the world, both survive and flourish entirely owing to the religious sentiment of some of our so-called backward people. We have to-day in North Bombay and U. P. hundreds of Nilgai sufficient to restock the entire scrub—forests of India. Why is there better preservation of Nilgai in open country where only a few know the existence of the Wild Life Protection Act than in forest areas where notices and wild life wardens move about in almost herds? Here again the answer is religious sentiment.

A common view held by some sportsmen is that the peafowl are harmful to crops, that Nilgai depredate farmland. This may be true but why should the hunter complain when the farmer on whose land this damage is done, does not complain and is satisfied. There is a rule in some wild life acts that a sportsman has to take permission first from the owner or the occupier of the land on which he intends to shoot. If the farmer does not wish the sportsman to kill game on his land he has the right to refuse him. How many sportsmen take this formal permission before shooting game? Moreover, rural people are so frightened of the official caste that most of them have not the courage to refuse them shooting on their land. For instance the Vala Girasdar of Saurashtra who considers the Blackbuck a sacred animal never

kills or eats its meat and hence on his lands the Blackbuck enjoyed complete protection. When this sentiment was abrogated by officers it resulted in the massacre of blackbuck and the species soon became extinct in the entire district. Similarly, where the Gaur was permitted to be shot under game rules, he was persecuted and finally decimated in certain areas, e.g. Mahableswar—Satara. Whereas, in parts of Maharashtra and Kanara where the people regard it as a sacred animal, it still flourishes. Sacred birds and wild animals protected under religious belief is a very small community which survive solely because of strong sentiment of the people. I personally do not think that present Indian wild life preservation is so successful as to justify the permission to destroy common Indian birds like peafowl and Sarus crane, even if a bag limit was imposed. Bag limit is an impracticable measure for controlling small game shooting and cannot be enforced successfully in the present conditions, however strict the rules may be on paper. It is, therefore, not unreasonable to err on having too many peafowl, Sarus cranes and the like than taking the risk of relaxing rules and extinguishing an entire species. Not long ago there were feverish attempts to revive the much condemned feather-trade in India but fortunately for the peafowl, the Government realised the danger in time. One may get dollars for fur and feathers but dollars will not be able to recreate the carrier Pigeon. I have discussed the damage peafowl do to crops with intelligent farmers. They say that peafowl do create a nuisance and are harmful to certain crops, yet they say that they do some good also by destroying insects and reptile pests. Their opinion also is that much of the harm done to crops is owing to an epidemic of insect pests and by untimely bad weather, neither of which they can control. As for the Nilgai and the havoc they create in cropland I have been astounded by the toleration of the farmer who regards the Nilgai as a sacred cow and allows part of his crops eaten for that sake. Indeed he is a philosophical farmer. Modern scientific wild life conservation permits and encourages the farmer to preserve useful game on his land and in some countries he is taught to do so and reap an extra harvest from it. If proper wild life conservation was implemented there would be no rightful case for a species to be protected on religious basis alone except by the wishes of the people on whose land the wild life was found.

Let it be said without hesitation that the Indian Board for Wild Life has not suggested any species to be completely protected on religious sentiment but has advised States to protect certain species on account of their becoming scarce and to revise such lists according to local conditions. And where a species is protected under a State law it is so done to save it from indiscriminate slaughter and extinction. The danger of relaxing such laws is great especially when the Wild Life Protection Acts are not being properly enforced. A time will come when the religious farmer will demand the removal of Nilgai on his land when he cannot sustain the harm it does. What he resents is the cruel way in which slaughter takes place and the bloodshed on his land. He is, I know, prepared to allow the surplus Nilgai to be captured

and taken away even if it were for restocking depleted areas. Will Government launch such programmes? Or will it destroy this enormous resource on contract basis, disregarding the feelings of the people who have preserved it scrupulously. A State can use its power of destruction as it likes but it is unwise to do so against the wishes of its people though they may not always express them. Would you shoot on private property if the proprietor showed his dissatisfaction? Much of to-day's wild game is preserved on the land of the vegetarian and religious man than by meat-eating people and by sportsmen. I regret to say the real sportsman who stalks his big-game and enjoys a small game shooting party is a fast disappearing species. Whereas, the naturalist-cum-photographer is not heard of. And the man who uses a jeep for poaching and shooting is increasing rapidly.

Sportsmen of to-day should not grouse over the ban on protected species, there is an enormous variety of small game which is permitted to be shot and it is doubtful whether he can afford the price for shooting all species seen by him and given on his licence. Nevertheless, in certain areas where protected species are in good number and if a sportsman shows his desire to stalk that game, he should be permitted to do so under the vigilance of a wild life officer. Written applications should be sent to the executive officer for such permission and bonafides should be given it. It is better to permit the shooting of a few Indian lions than close one's eyes to illegal destruction. As for the peafowl, certain forest blocks may be given out for shooting where the bird is plentiful and where the local people have no sentiment against it being slaughtered. This would certainly conform to modern wild life conservation standards. State Governments are empowered to modify and frame their shooting rules according to local conditions and this is exactly what is being done in certain States with regard to permitting Big Game to be shot on licences. I cannot quite understand why the modern sportsman does not pull his weight to demand the ban on shooting game that has been overshot in certain areas. I know some areas where the common hare is decimated but no sportsman has yet stood up on his legs to demand its protection. Paradoxically I know sportsmen who once in a year get a chance to fire at a peacock and he is the one person who shouts hell down for it to be put on the open list. It is indeed shameful for the modern wild life conservationist to feel that religious sentiment is a better preserver of wild life than himself. The existing machinery that is responsible to enforce wild life legislations is completely inadequate. On the other hand, take monkeys, stray cattle and wild pigs. Monkeys have enjoyed protection in India since time immemorial owing to religious sentiment. To-day it is the most destructive and widespread vermin. If monkeys are not reduced on farm land, the Government should certainly minimise their number in forest areas, especially where its natural predator the leopard is destroyed. The more profitable method of monkeys being trapped and exported is a good solution to the problem. It should be encouraged on a large

scale. Wild pigs have to be destroyed where they menace the crops and stray cattle should be captured and made use of.

The danger of a species being exterminated once it is exploited on mercenary basis is so tremendous that before it is realised the damage is done and the species is on its way to extinction. Take for instance the crocodile in India, it has disappeared in recent years owing to indiscriminate killing for its skin. Any species may become scarce suddenly if it is destroyed for commercial gain or wanton slaughter. The Musk deer is a threatened species in India. Hence, until wild life conservation in the country reaches a practical standard when wild life legislation is adequately enforced, it is unwise to interfere with religious sentiments of the people who are doing National work of wild life protection which a government service would otherwise have to do with a large expenditure.

The Corbett National Park and Ramganga River.

Having heard and read so much about the fishing in the Ramganga River in this area, three of us, veteran anglers, decided to spend a week in the well-known Sanctuary. We had first planned to go in the middle of March this year, but unfortunately, one of the party was not able to make it, so we went in the third week of April. The Fort Pick-up was loaded to capacity with our kit and servants, and although the journey was a tiring one we were lucky in not having any trouble on the way. The distance from Dehra Dun to the Sanctuary via Ramnagar is about 164 miles. There are jeepable roads from Kotdwara and Kalagarh, which would have shortened the distance considerably, but I was advised by the D.F.O., Kalagarh to proceed via Ramnagar as these tracks were very rough in parts, and only fit for jeeps. The extra mileage was worth it, as we were able to maintain an average speed of 30 M.P.H. most of the way, which was a great saving in time.

For intending visitors from Ambala, Saharanpur and Dehra Dun I give a brief description of the route. There is a 'tarmac' road from Dehra Dun to Hardwar via Rikhikesh. At Hardwar the Ganga River is crossed by a bridge of boats (December to May); other months by a ferry at Chandighat. After the river crossing, there is a forest road to Chila Rest House; you then continue along this forest road (motorable in dry season) to Ramnagar.

From this point the road is good to any of the Forest Rest Houses in the Park. Permission to use these Rest Houses must be obtained well in advance from the D.F.O., Kalagarh Forest Division, Lansdowne, U.P.

At Dhikala there are modern hutments, and a very good Forest Rest House for the convenience of visitors. It is a picturesque spot and well worth a visit, situated in undulating grass lands close to the Ramganga river and surrounded by low forest clad hills. Cheetal are fairly plentiful, and when driving along the side roads in the forest we saw three herds in which there were some quite good 'heads'. The forest department have constructed 'hide-outs' at the edge of the forest from where visitors can view 'wild life'. Elephants can also be hired from the forest department for this purpose. If enough time is spent in the Park, there is every chance of seeing the larger carnivora and the herds of wild elephants.

A small fee is levied by the Forest Department for the use of a 'cine' or 'still camera'.

While fishing we saw two bears drinking at the river, a young tusker, and two crocodiles 'cooling off' in one of the pools on a warm afternoon. On another evening a herd of elephants were quite close to Serapduli Rest House where we were camped. The contractors' workmen, who were also camped in the bungalow compound, became nervous and they made a lot of noise beating empty cans and shouting, this scared the elephants off. I have on more than one occasion watched a herd feeding in Motichur and Raiwala, and have observed that they are not aggressive if undisturbed.

We fished the larger pools in the Ramganga river from about two miles east of Serapduli to about one mile east of Dhikala. We caught several small fish, the largest taken was 10 pounds, but they provided good sport. A good river for light tackle. One morning we visited some pools about two miles upstream from Gairai Rest House, and while proceeding along the forest road, which follows the river, we saw several good size Mahseer cruising in the crystal clear water. The banks of the river here are very steep, almost perpendicular, to water level, and if you had the luck to hook a 'big one' you could not follow it. One of us did try further upstream, where the path crossed the river, but he had no luck. There is a motorable forest road to Gairai Rest House.

From local information I have come to the conclusion that the best time to fish the Ramganga, near the Sanctuary, is from the beginning of January (by which time the forest roads are repaired) to the end of March. After mid-April there is not enough water in the accessible pools to hold sizeable fish. Although our party arrived at time when the pools held very little water we had good sport with small fry despite our brief stay. Judging from the number of big fish we saw in the deep pools, I feel this river has great fishing possibilities, given more time, and before the water level has dropped.

O.D. Jackson.

An Introduction to Angling.

When the first child bent a pin, for a hook, and used a piece of bread on it to catch the first little fish, it was the beginning of angling. Then it is said, a woman, somewhere in Europe, dropped a spoon in a river, while washing cutlery, and watched it twist and turn like a little fish in the stream, while sinking to the bottom. She was surprised to see a big fish, in the clear water, grab the spoon. She told her husband, and thus started spoon-fishing.

The husband who was an angler, soon made a small spoon, with a hook attached to it, and caught the first fish on a spoon. During the decades that followed, science came to the help of the angler, till in modern days 'plugs' that resembled fish more than a spoon, tossing and turning in the water, were made. The modern plug resembles a small fish so nearly and completely that even an experienced person looking at it in the water, can mistake it for a small fish getting away to safety. The plug has hooks attached to it, and a Jaw-piece device, which makes it wiggle in the water when the line is pulled by the angler and as some fish eat their own kind they attack the plug, mistaking it for a small fish, and get caught.

To enjoy such sport, there must be fish in the rivers of the country, and this will only be the case if they are preserved, bred and propagated. With the technique of angling it is not at all possible to catch fish on a commercial scale. The angler can take just enough for himself and his family, after very hard work. The pleasure of a holiday spent like this in picturesque surroundings, is very great aid to mental and physical health.

There are many unsporting and criminal ways of killing fish, such as bombing and dynamiting, using small mesh nets, poisons etc. These afford no pleasure to the unscrupulous people who indulge in them; in fact they leave a sickening feeling in the heart of right-thinking people, because nature's wonderful gifts to man are destroyed wastefully.

By the first method of killing mentioned above, i.e, bombing, and dynamiting, large number of fish are carried away by the stream, to disintegrate and putrefy lower down the rivers. Poisoning completely destroys all the fish in the pool, and here again more fish are lost than recovered. The use of small mesh nets prevents the young from escaping and so threatens future stocks.

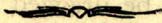
There are many types of fish and the sport varies with each variety. For example, in big-game fishing, as it is called, out at sea, the angler is strapped to his seat in a big sea-worthy boat; otherwise he would be dragged into the sea, when big fish weighing hundreds of pounds are hooked. These big fish when hooked, go deep down into the

sea, reeling off hundreds of yards of strong line, and by the time they are landed the angler is completely exhausted. For this type of fishing very strong short rods and big reels holding a large quantity of line is used. Then there is tank-fishing where the angler sits on the bank of a tank, with a worm or ball of paste, or berry on the hook. This is a game of patience and gives its advocates rest and recreation. Only those fish which take moving objects resembling small fry, fly, or worms etc. are called 'sporting-fish'. There are others which eat vegetation or moss from the stones at the bottom of river beds, these are very difficult to take on rod and line. Fish, in regulated quantities only, should be netted in large mesh nets for consumption in big cities. Unfortunately all varieties and sizes of fish are sold and the proper balance of the fish population is not maintained these days in our rivers, so much so, that our best sporting river fish the Mahseer, is gradually becoming scarce. No stretches of water containing sporting fish are specifically reserved for fishing with rod and line except in certain trout-fishing streams in the Himalayas and south Indian hills. If this were done, there would be no shortage of angling opportunities for sportsmen in the country, and visitors from abroad, and the future generations of the youth of the country would learn to appreciate the value of fish and fishing for recreation, sport and proper diet. They would grow up with well-formed characters while learning the age-old art of angling, and thus become interested in conserving the fish wealth we have inherited in India's great rivers.

The modern fishing tackle in itself is a pleasure to own and possess : there are modern spinning and casting reels made with the precision of swiss watches, with automatic touch control ; lines of nylon, and various plugs, spoons, flies etc. which are the valued possessions of the hardworking fisherman, who looks forward to a fishing-holiday on the banks of sunlit waters.

I have only given a general view, of the types of fishing, and an elementary idea of fishing tackle, for the beginner. The places to go to, the types of rods, reels and lures to buy, and the types of fish which one can catch are given in various books, which the interested young angler can procure and read. Some of them are, "The Complete Indian Angler" by John Masters, "Sunlit Waters" by Captain Conway, "Circumventing the Mahseer" by McDonald, "The Rod in India" by Thomas, "The Mighty Mahseer" by Skene Du, "Trout Fishing in Kashmir and Kulu" by Col. Skinner.

Gurkirat Singh Mann.



Conservation of Trout and other Fish in Kashmir Valley.

There has been so much talk recently in this neighbourhood (Dehra Dun) of the progressive deterioration of Mahseer fishing since the spawning streams have been left to the tender mercies of the gram-panchayat that an account of the brilliant achievement of the Kashmir Fisheries Department may possibly point the way to successful efforts on similar lines in other parts of India.

Brown trout (*Salmo Fario*) and Rainbow trout (*Salmo Irideus*) have been cultivated in Kashmir for sixty years. I believe that they were first introduced into the Gangabal Lake at an altitude of more than 11,000 ft. above sea level. But before fishing in the lake could be opened, the Pandits declared the lake sacred, and fishing was forbidden. But all was not lost, for a number of the trout escaped from the lake into the exit stream which forms the Wangat river, a tributary of the Sind, where they spawned and increased in number enormously. So the Sind river was the first natural home for trout.

At an early stage in their life the trout of Kashmir achieved an important status: they were nationalised and became state property. If your house contains a pond or is on the banks of a stream, a State official may confiscate any trout he may find therein. Trout may not be sold in the open market, but individuals may purchase them (at Rs. 3/- per lb.) from the State hatcheries. A black market in trout is not unknown in Kashmir, but, all things considered, is surprisingly ineffective, and at all events everyone there knows that the taking and sale of trout is illegal. Different rates are charged for fishing for trout and for the other 'coarse' fish—Mahseer, choosh and chiroo—the rates for trout fishing by rod and line being naturally very much higher (Rs. 10/- per day, and Rs. 45/- per week). Trout may only be caught by fly fishing and spinning with artificial baits, though the distinction between fly-fishing and spinning, in these days of thread-line reels, is a very nice one. But more of that anon.

In most of the waters the question of stocking is left to nature aided by restrictions on the daily catch by each rod, and the number of days in the month that fishing may be booked in particular waters. But floods, to which the trout waters are only too liable, sometimes decimate the stock of fish and restocking is done from any one of these main hatcheries, one near Chishma Shahi, available for the Sind and Wangat waters; another at Achabal, for the Bringhi, Kokanag, Achabal, Verinag, Panzat and Kulgam waters; and a third at Trikku for the Liddar waters. The construction of hatcheries is facilitated by the innumerable springs, for which Kashmir is famous, which are due to the limestone rock of which most of the nearer hills consist. But, as has been said, for the most part, the trout look after their own

propagation perfectly well. In fact some streams like the Nowbuqs, Dyas, Bidiyar and upper Bringhi are overstocked.

The visitor to Kashmir has more than forty beats to choose from varying from two to eight miles long and five or six more may be opened within a year or two. They are grouped mainly round the main river systems—the Kishenganga, the Sind, the Liddar and the Bringhi. The former we need not consider, since, it runs along and sometimes crosses the 'cease fire' line. It used to produce some very heavy fish, but early or late in the season only, since it is affected by snow water. I should add that season for trout-fishing on all the waters is from April the 1st to September 30th.

The Sind, the first home of Kashmir trout, is divided into twelve beats, and there are two tributaries, divided into three beats, the Wangat and Chatragul. The Sind also is only really good early and late in the season.

The Liddar is divided into six beats, and the valley also includes the Kotus, a spring-fed stream, and no less than five special preserves, including the famous Trikkar, that are only left out occasionally, or to distinguished visitors. These sixteen beats always produce some very heavy fish, a 13½ pound having been caught this year on the fly. The Bringhi contains eight beats on the river itself or its tributaries, and four spring-fed streams providing six beats—the Kokanag (upper and lower), the Verinag (upper and lower) and the Achabal.

In addition to the beats associated with these three big rivers there are other isolated waters: the Kulgam beats, taken from the Veshoo river North of Khanabal are, none of them, now open. The waters are very susceptible to floods, and great havoc was caused in 1959 and even after two days heavy rain this year. The growth of trout in these waters is quite phenomenal, as the supply of water-bred insects, not to mention the millions of frogs, is particularly rich. Given three years free from floods, or a successful control of flood water, the six Kulgam beats will produce wonderful trout fishing year after year. Attempts have been made to stock two streams coming down from the mountains above Gulmarg—the Ferozepur and the Ningle; but these two streams, not rising in limestone hills, are, I believe, particularly susceptible to floods and droughts. It must never be forgotten that, in Kashmir the needs of the cultivator come before the aspirations of the angler. Rice is a thirsty crop, and, if the rice-fields need water, even the most exclusive and desirable trout-streams have to surrender it.

Two natural streams rise in the Harmukh massif and enter the Wular Lake near Bandipura, the Erin and the Madmalti, near the foot of the road over the Tragbal pass to the Kishenganga. The Madmalti used to be a very fine stream, full of good fish, but its proximity to Military camps makes conservation almost impossible, and it is for the moment closed. The

Erin is open, and, though I have never caught a big fish in it, it fishes well and remains well stocked with medium sized fish.

Finally there is a bit of fishing that is altogether unique—the Vishensar Lake, and the stream that issues from it in the Tilal direction, at 12,500 ft. The lake itself is full of medium sized trout in rather poor condition. Ordinary wet-fly methods with small flies, are effective when the water is ruffled by wind, or before or after the sun is on the water. In a flat calm, and in full sunlight you can still catch fish by using a dry-fly, black gnat or small sedge, and floating it in front of fish which you can see cruising and picking dead flies off the surface. It is the most exciting fishing, though you will not catch a big fish that way. The stream that issues from the lake is still more exciting. At first you think that it will never make a stream, as it trickles through great wastes of boulders. After a furlong or two it pulls itself together and makes a compact stream with good pools, and the trout are as fat as butter and in tip-top condition. A trout of 12 lbs. 5½ oz. was recently taken in this stream. A week can be spent on these waters and preferably in July, or it may be booked on a daily basis. There is seldom much competition. Owing to the heat, July is the worst month for fishing in Kashmir to those who enjoy camping in a really cold climate, with a wealth of wild flowers, and the possibility of walking into a red bear, engaged in sampling some particularly tasty grass roots. It is an ideal way of spending ten days, but do not be too late. I was caught there once by an early snow-fall at the end of August and had to walk back to the Sind valley in eight inches of fresh snow with no better footwear than grass chaplies.

How is all this magnificent fishing organised? At the head of it is my good friend, G. M. Malik, Director of Fisheries. He has been there for at least fifteen years, and, so long as he is there, there is no fear that Kashmir trout-fishing will deteriorate. He is an experienced fisherman, and an expert pisciculturist. Under him there are Jemadar-watchers, roughly responsible for the main river systems mentioned. Under these Jemadars there are 'watchers' for each beat—sometimes two, that is more than forty watchers. Under the watchers there are the licensed shikaris. It is a rule that every fisherman shall employ a licensed shikari at Rs. 2/- per day. This fellow's only duty is firstly to see that you obey the rules, do not take more fish than allowed, observe the rules regarding size of fish and methods of catching fish. Some of them are conscientious, some are inevitably susceptible to bribes. It is the moral duty of the sportsman to keep the rules. The shikari will also fit on your flies, put your rod together, land your fish, climb trees when you have got your fly caught in them, and offer advice as to how and where to fish. It is illegal to hand over your rod to him and ask him to fish, which he is only too ready to do. The good shikari—and there are many—is a good companion and a 'very present help in trouble'; the bad one has just to be endured, and there

is nothing to prevent you from insisting on landing your fish yourself if his methods cause you misgivings.

How is control exercised? The beats may be weekly or daily, the more remote ones being weekly, though weekly beats may be booked on a daily basis if no one has booked for the week. The weekly fee is Rs. 45/- and the daily fee Rs. 10/-. This sounds a lot, but it is not much by British standards, and in view of the results obtained. On a weekly booking you are allowed either 42 or 35 fish. Normally you should catch your quota—even assuming that your fish are all the minimum size (10" or $\frac{1}{2}$ a lb.), you have caught 21 lbs. or 18 lbs. of trout, which sells at Rs. 3/- a pound. You may well have caught a far bigger weight of fish. On daily waters the rules vary. On some you are allowed a fish with a ten inch limit, on others, where the average size is high, it is 4 fish and the size limit is 14" or 1 $\frac{1}{4}$ lbs. Some daily waters are allotted an unlimited number of times; others are twice a week; the more select are twice a fortnight or even less. In this way control is achieved, provided that the sportsman keeps the rules. It must be remembered that some of the smaller waters, particularly if they are spring-fed, produce the biggest fish, because of the rich feed offered by the spring-fed waters, with their abundance of water-weed, which produces fish-food in the way of shrimps, water-tred flies and so on.

The rules for fishing are 'fly only' in some streams; fly and lure (a lure is a large fly with two hooks, probably representing a small fish rather than an insect) in others, spinning baits are allowed in others: and in others spinning baits are allowed only in deep pools.

Generally speaking spinning is allowed only in the main rivers. But what is spinning and what is fly fishing? I know a member of this Society who bought a Hardy's fly rod and then sold it because he preferred spinning to fly fishing. I simply cannot understand him. It is possible to fit a fly with a weight attached at the end of a cast actuated by a fixed spool spinning reel. Is this fly fishing? I say 'no', Mr. Malik says 'yes', because the lure at the end is a fly and does not spin. To my mind the distinction between fly-fishing and spinning rests in the reel. If a fixed spool reel is used you are not fly fishing. The object of restricting some waters to fly or lure only is to prevent anglers disturbing small waters by throwing a weighted lure from a spinning rod and reel into the water. I leave out of account the extraordinary fascination of fly fishing with a reel fly rod and a fly reel. As to efficiency, I can only say that the genuine fly rod method enables you to repeat a cast immediately, having perhaps caused a fish to come for a look with the first cast. With the fixed spool reel you would take some seconds to retrieve your cast. Where it is a question of accuracy, upto twenty yards, I would far sooner trust the fly rod.

English and American fishermen may well ask what are the chances of the dry fly in Kashmir? I am a very keen dry fly-fisherman and I have used it, with success in Kashmir, but not with unqualified success. With the big rivers like the Sind, and the Liddar the question of 'dry-fly' scarcely arises. The other streams, and particularly those that are spring fed, very much recall the chalk or limestone streams of England, and the smaller fish respond eagerly to almost any dry-fly floated over them. I have got to confess, however, that I have never yet caught a trout of more than two pounds on a dry fly in Kashmir. The bigger fish do not appear to feed on the surface at all, or rather the Kashmir trout cease to feed on the surface at a comparatively early age. You do see plenty of surface insects—three or four kinds of ephemeridae, sedges and gnats. I once saw a good fish in the Liddar regularly sipping spent spinners in the tail of a big pool. But usually the nearer the bottom you can make your fly move the more likely you are to get a big fish. This is not to say that you only get big fish in deep water. They often feed in surprisingly shallow places. I have often considered fishing one of these streams solely with the dry-fly, but invariably the prospect of a big fish has induced me to put my trust in a well sunk lure. These 'lures' are large two-hooked flies; far the best known being the 'Peacock and Jungle fowl' with a silver body. What these lures represent is far from certain. They certainly represent no known insect. Possibly they represent a small fish, or a tadpole, or the larva of a dragon-fly. On a difficult day it often pays to abandon lures and use small wet flies, such as the Greenwell's glory, woodcock and yellow, grouse and claret, teal and green. This is specially true when one is fishing a side-shelf or where the water is low and the sun bright. I have often fished a pool with a lure ineffectively, changed to a small fly, fished it again a minute later and been rewarded with a good fish. Sometimes, when fish are very dour and patently not feeding they may be goaded into activity by putting on a bright Salmon fly such as green Highlander or Jock Scott.

It will be seen that trout conservation in Kashmir is regarded as an important asset to the tourist industry, since many people go to Kashmir, myself included, only to fish. The fishing is by no means cheap, but it is extremely good, and the expense of maintaining the trout waters are considerable. I have not seen Mr. Malik's budget, but probably his revenue falls far short of his expenditure. At the same time it probably pays in the long run, since it brings visitors to Kashmir who benefit the hotels and house boats, and who make considerable purchases and employ labour. The price of 'watchers' employed are not paid very handsomely, and they have a lot of work to do both in and out of the fishing season. Many of the trout waters would not provide a home or feeding grounds for trout if they were not artificially 'bunded' to form pools of relatively slack water where trout will stay and where insect life can breed. Moreover in the winter the larger snow-fed streams shrink down to a

mere trickle, and the watchers have to rescue trout that have been stranded, and see that the village folk do not help themselves.

It will be seen that the village panchayats have no fishing rights at all in trout waters. Since Kashmiris are generally far from vegetarians does this mean that they have to go without fish? Licenses for net fishing, and fishing with rod and line in non-trout waters are issued by the State at very cheap rates. Moreover the 'mirror carp' has been introduced into lakes of the valley and has thriven so exceedingly that fish is the one item of diet that has remained cheap in Kashmir. Large numbers are netted or caught by handlines daily and brought to market.

Could not we follow the shining example of Kashmir in districts where the Mahseer is found, and make Mahseer fishing into a part of our tourist industry? In particular could we not protect their spawning streams? At present in the Doon these streams have been handed over the Gram-Panchayats for exploitation, and they are being exploited so ruthlessly that it is only a matter of time before the Mahseer of the Ganges and the Jamuna are exterminated. They cannot survive possibly if every year the spawning fish and later on in the year their offspring are decimated. Our Society has made an admirable start by reserving a sketch of the Jamuna for Mahseer fishing; but the job will be incomplete until we also gain the right to protect the spawning streams such as the Song, the Asan, the Rai Nadi, the Agla, and the Giri. It is really a task for the Government, but if Government will not move, we must do it ourselves. The Ramganga is another stream that calls for similar protection, as also the Sarda and its tributaries. The Beas, in the Punjab is very well conserved, and is still a fine Mahseer river. They manage their things better in the Punjab than the U.P.

R.L.H.

भारतीय वन्य-जीव प्रतिरक्षण परिषद्

Wild Life Preservation Society of India



Admission to Membership

*On behalf of the Wild Life Preservation Society of India, I have pleasure in admitting you.....
of..... (.....)
to the..... Membership of the Society.*

I hope that you will do your best to foster the aims and objects of the Society and to further its interests.

.....
Hony. Secretary

.....
Executive Vice-President

Dehra Dun, dated.....19

Picture Story of Trout Fishing in the Pabar Valley

By GURKIRAT SINGH MANN



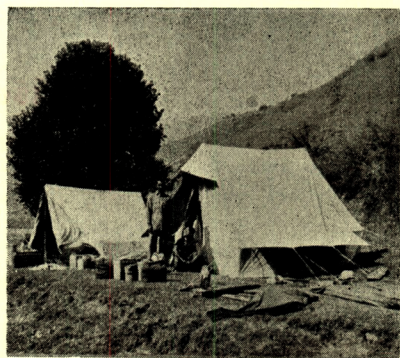
The Road North from Simla passes through very picturesque scenery.



But in some places is as dangerous and perilous as this.



The reward of the dangerous 85 Miles journey from Simla is the crystal clear "PABAR", trout river 5000 ft. above sea level.



One can camp on lovely green turf on the banks of the river.



Trout such as these upto 5 lbs. are common and take gold, black and copper spinners vigorously.



Take your cat with you, they love to select one for dinner every night.

WILD LIFE PRESERVATION SOCIETY OF INDIA.

7, Astley Hall,
Dehra Dun.

Dated 6th June, 1960.

FISHING

Dear Sir,

This is to inform you that your Society has taken over the fishing rights of the Jamuna and Tons junction from Kattapathar to Dakhpathar with the object of conservation of fish, and for the benefit of the Rod and line angler, as far as possible. The agreement has been completed and notice boards are being put up against poachers.

This stretch of water is situated on the main Chakrata Road—26½ miles from Dehra Dun, near Kalsi, and is approachable by car. The road is tarred throughout and there is a Rest House of the Canal Department close to the spot, called Ambari Canal Bungalow. Permits for this bungalow can be obtained from the S.D.O., Dun Canals, Dehra Dun, for those who wish to stay there for their fishing trip.

The fish remain at this junction throughout the year, but the best times are October and November. From the 15th May when the Tons river gets dirty with snow water and the Jamuna remains clear, to the beginning of the rains, the cream of fishing is had here in the cool early morning from 6 A.M. to 10 A.M. One just cannot stop pulling fish out—they take vigorously. The fish caught at this time is not as big as those caught in October. It was here, last year after the rains, that Maj. E. G. Mainwaring caught a record fish of 55 lbs, from that area.

The fishing permit rate is as under :—

	<i>Members and their guests</i>	<i>Non-Members</i>	<i>Ladies and Students</i>
			<i>Half Rates</i>
DAILY	Re. 1/-	Rs. 2/-	
WEEKLY	Rs. 3/-	Rs. 6/-	
MONTHLY	Rs. 5/-	Rs. 10/-	
YEARLY	Rs. 20/-	Rs. 40/-	

You are requested to take out an annual permit, to help the Society to maintain the watch on these waters, and to be able to make the scheme worthwhile, for which the Society needs funds. Your help will be of the greatest value to the Society.

We hope that you will enjoy great sport with Mahseer fishing here, and the efforts of the Society to make this possible will be crowned with success.

Yours faithfully,
GURKIRAT SINGH MANN,
Honorary Secretary,

Wild Life Preservation Society of India.

Note :—After the 15th of June, several permits were issued and the results were very encouraging. Anglers caught 6 to 9 fish in a morning, on spoon and spinners. Maj. Mainwaring got one of 25 lbs. and nine others in two days. He caught 20 more Mahseer and released them because he had already caught sufficient for the pot.

—Editor.

Editors Note.

A number of Shooting Blocks in Uttar Pradesh appear to remain vacant after the 'draw'. Such blocks remain un-protected by virtue of no permit holder being in occupation of the same.

This matter was discussed at an Executive Committee Meeting on 9th April, 1960, and it was felt that our members who are fond of sport should come to the rescue of wild life by taking up these blocks.

In order to make this possible, the following measures were accepted :

(a) To approach the Chief Wild Life Warden, U.P. to inform this Society, monthly, of any vacant blocks in the State, also to address a copy of the results of the draw for all divisions to the Honorary Secretary every month.

(b) To make it known to members of the Society that they may intimate to this Office of any blocks drawn by them but not accepted.

(c) To collate the information received from the Chief Wild Life Warden and Sportsmen, and to post a list of these vacant blocks, monthly, on the office Notice Board for the information of interested members.

(d) To encourage members to visit blocks by endeavouring to arrange facilities for small game shooting with other members who are small Game permit holders, and who are agreeable to take on guests.

It will, therefore, be appreciated if Sportsmen, not accepting any block drawn by them, would please communicate to the Hony. Secretary the name of the block, and the month for which it has not been accepted. This information will be of value to other members who have not been so lucky in the 'draw' and who would like to apply for a vacant block.

Members allotted small game permits, who would not mind taking on another member as a guest, may also please inform the Hony. Secretary from time to time, as early as possible of the month for which he is prepared to take on a guest. A Guest permit holder is permitted, according to the Forest Rules, to operate independently.

In addition to the reciprocal benefits of these arrangements for members, enabling them to get out into the forest, it will also go a long way in keeping out the poacher by our continued presence in blocks. We also appeal to members to bring to light any infringements noticed by them.

Her Last Hunt

BY DR. K. KADAMBI, Mysore Forest Service.

SUMMARY

The paper attempts to give an intimate insight into the habits and ways of life of the South Indian Panther—*Pantera pardus fusca*. The characteristic way in which the panther goes about getting its food, the mischief which it is capable of making near human habitations, etc., have been portrayed, bringing out, in the incidents described, the animal's remarkable intelligence and reasoning power. The whole study has been narrated in the form of a story. Of special interest is the way in which a panther, driven to bay by wild dogs, often behaves.

This study was made in the forests of Mysore State between 1935 and 1940.

The female panther went ahead. Her mate, not quite as large as she, but perhaps even more savage, was at the same time more shy of approaching the habitations of man. Full of suspicions, but driven by the pangs of mid-summer scarcity, he followed at a little distance, while the female, crouching close to the ground, led the way across the open to the low, grass-muffled outhouses of a lonely wilderness farm.

She was a strange, forbidding and sinister figure, this fullgrown forest panther, and past her flower of youth, a kind of gigantic rough-haired cat with fine, large, proportionate pads of the size of a fullgrown Alsatian dog, and hind legs and haunches handsomely developed as if in imitation of a mature hound. Her oval face, stiffly whiskered, and with a sort of soft down beneath her neck, and strong jaws, looked indescribably savage and wild, lit as it was by a pair of round, winking, palely-luminous eyes, and surmounted by sharp ears fantastically tufted inside. In ground colour she was of a shadow light brown, faintly toned with a darker hue of the same colour on her back but fading off into creamy white on her belly, but richly spotted with rosettes of jet black all over her ample body, the rosettes fading away into solid spots in the region of her knees and ankles. Her grotesque but extraordinarily powerful hind-quarters were finished off with the straight stub of a once handsome tail, perhaps four or five feet in length. She might, in fact, have looked like a caricature but for the appearance of grace and power and deadly efficiency which she conveyed, the expression of menace in every movement.

Under the necessity of an empty stomach⁽¹⁾, the big panther had visited this forest abode once before, prowling as deep as she dared into the clearing, in the first shadow of a late summer afternoon. She had seen in the yard a couple of oxen—which were too big to interest her. What was more to her purpose, she had seen some huddling goats. Then, a draught in the evening blowing from the direction of the farm-house had borne to her nostrils the smell of man, and she had slunk off hurriedly to her jungle hide-out. But those goats?

The smell of them, the remembered relish of a lamb which she had once devoured in the thickets⁽²⁾, stung her appetite to madness. Like most of the wild creatures, she had learned, more from instinct than experience, that the strange looking, two legged beast was less to be dreaded by night than by day. So, well after nightfall, she had returned to the farm, bringing her ravenous mate with her.

At one side of the yard, startlingly bright in the light of the rising moon, stood the new rich farmer's house⁽³⁾; at the other side, two low connected barns, with a shed running half-way to the house. The long, black shadows of the buildings stretched nearly across the open space between the farmstead and the forest. The open ground was hard packed and dried by the summer sun, covered with an inch of matty grass yellowed by the drought. The mon-

(1) This was ascertained by opening out the stomach and entrails of the animal after it was shot.

(2) A week before this incident, a lamb had been lifted from the herd while the animals were out grazing in the neighbouring forest.

(3) The forest had been cleared and a farm established by an Anglo-Indian settler who had retired from railway service.

soon would soon come and turn the yellowed grass into green. Through the space of shadow the female panther crept like a denser shadow, till she reached the corner of the nearest barn. Here she crouched making herself as small as possible while she took a long sniff at one of the cracks in the warped, ill-seasoned, mango boarding. Then she turned her head, and looked at her mate, who was crouching some ten paces to the rear. As if this was a signal that all was as it should be, he ran nimbly forward and crouched again beside her.

From within, besides that warm, distracting, muttoney smell, came comfortable rustlings of dry hay and sounds of chewing, and safe contented breathings. It was obvious that the goats were in there. The eyes of the female, piercing and impatient, searched the blank wall before her. There was no entrance from that side. Furtively she led the way round the corner, her mate still keeping a prudent distance. At the edge of the moonlit yard she hesitated; still there was no opening. Keeping carefully in the shadow, she prowled round to the other corner of the building, but with no better luck. Then, growing bolder, she ventured into the light and she crept down the front of the barn, flattening herself to the grass as she went; her mate, yet distrustful, and now growing angry as he began to feel that he had been tricked, peered round the corner and watched her⁽⁴⁾.

The female panther was now furious. She had expected to see those goats still huddled in the yard. Finding that they were inside the barn, she then expected to get in among them by the same way they themselves had entered. Where such fools as goats could, surely she could go. She knew nothing of doors that closed and opened, so she was puzzled. She drew back and stared up at the roof. Surely, the sheep must have got in by way of the roof. She could see no opening up there, however, so she went prowling round the other barn and the shed as well, finding everything shut up tightly against her. Then she came again to her mate, who was now awaiting her, tail and whiskers twitching with ill-humour⁽⁵⁾ in the shadow behind the first barn.

But the panther was not yet prepared to acknowledge defeat. The roof of the shed was lower than that of the barns. With a masterly leap she gained it, but only to fall back ignominiously beneath a mass of grass which her claws had disengaged from the roof. In the next attempt, however, she got a grip with her front paws upon the roof, and so drew herself up, but not without a sharp rustling noise of scraping and clawing⁽⁶⁾. The sudden sound

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- (4) The movements of the two panthers were ascertained by their pug-marks and the trail left behind by the animals as they passed through the herbaceous undergrowth of the forest clearing.
- (5) The twitching of the tail and whiskers is a common sight seen when panthers are angry or they are about to pounce on their prey. Their tail, however, twitches even if they are in a playful mood.
- (6) The two attempts, one successful and the other not, made by this panther to gain the roof of the barn were clearly visible from the disturbed thatch of the shed.

disturbed the hens, roosting inside immediately below the roof, and they set up a shrill cackling of alarm.

The panther stopped, held herself rigid, and strained with all her ears. Chicken would do for her almost as well as goats—if only she could get at them! She clawed savagely at the roof⁽⁷⁾, but it was new and strong, and she speedily found that there was nothing to be hoped for by that procedure. Frantic with baffled eagerness, she ran along the shed and sprang with a magnificent bound to the roof of the barn. At the thud⁽⁸⁾, of this landing the cattle stirred and snorted uneasily⁽⁹⁾, and the two horses whinnied with anxious interrogation.

At this instant the shutters of a window in the farm house flew out with a clatter. The panther turned her flat, cruel face sharply toward the sound and saw a jet of flame spurt from the dark window; a crashing thunder shocked her sensitive ears, and something hummed viciously close above her head⁽¹⁰⁾. Fortunately for her, the light of the moon is a deceptive light to shoot with. She left no chance, however, for the new rich farmer to try a second shot. With one wild leap she cleared the roof and alighted on the grass behind the barn. She saw her mate already fleeing, and she followed him, with long, panic-stricken leaps.

Well within the shelter of the forest, the female panther found her mate awaiting her. He stood, with his neck turned fully round beside his shoulder, eyeing her dangerously. What he wanted to convey to her by that glance cannot with any certainty be recorded, but it was certainly unpleasant, for she turned aside, in a casual way, and pretended to sniff with avidity at the stale trail of a civet. It was difficult, however, to develop any interest for any length of time in anything so hopelessly uncertain. After a couple of moments she wandered off stealthily, in search of some more recent trail. Her mate, though hot with disappointment and scorn, jogged along within a few bounds of her. In a season of such scarcity⁽¹¹⁾ it seemed to be the interest of both that they hunt together, so far as their suspicious and morose natures and their frayed tempers made this possible.

The woods lay still as in death. The very air seemed muggy under the intense summer heat. The glare of the partly clouded and muffled moon was fleeting like a spot of light

(7) This was judged from the badly disturbed condition of the roof at the place where the hens were roosting directly beneath the roof.

(8) & (9) This noise actually woke us up from our sleep.

(10) This was a fatal shot but the author, unwilling to break the continuity of the narrative, has permitted himself the digression from actual facts.

(11) That year there was a poor rainfall.

reflected from the rippled surface of water. It seemed to devour even the strong, stealthy forms of the gliding panthers, to change them into a pair of drifting ghosts, which turned their heads from side to side as they went, and flashed from their eyes a pale, blasting glow⁽¹²⁾.

But the female panther had a ghostly hunger—as had also her mate. Suddenly her glowing eyes detected, under a spreading *jamun*⁽¹³⁾ a spot where the ground had been disturbed. To a vision less keen it would have indicated nothing, but to her it was clear, unerring indication. Turning sharply left from her trail, she pounced upon the roughness on the soil, and began digging furiously with her forepaws. In a few moments she was buried upto the knees, for the ground, here in the shelter of the trees, lay softer than in the sun-beaten fields. Sniffing her way by her well trained nose, she followed a deep trail which led in towards the trunk of the *jamun*. Her mate, meanwhile, approached and watched her enviously. A few seconds more, and her head emerged amidst a shower of mud. In her jaws she held a big field-mouse. The unhappy rodent had buried itself in the mud that it might escape its enemy whom it had seen approach like a phantom. For a second more its dying paws stretched and retracted spasmodically, then the panther crunched the life out of it and devoured her meal⁽¹⁴⁾. The ill-humoured male came nearer, crouching with a conciliatory air, but the female was not a spouse of an obedient type, and a single field-mouse was not even half a morsel for a starving panther. With a vicious snarl she put out one great paw in warning. Her mate stopped, licked his lips angrily, then turned like lightning and scrambled up a neighbouring pipal tree⁽¹⁵⁾. His ears had caught the startled twitter which had answered the snarl of the female panther. There were wild-fowl nestling in that tree. His ivory claws, however, clutching at the bark, announced his coming, and for all his speed the birds escaped him, flying out blindly with terrified screams to the neighbouring trees and perching themselves on the top most slender branches where he could not go. Snarling with the anger of disappointment he descended the tree, and continued his prowls at a distance of some ten hops from his selfish mate who had by this time long finished the field-mouse⁽¹⁶⁾.

(12) Normally this glow is visible only when a ray of light is directed towards the eye. The eyes of carnivora, and in fact of practically all higher mammals excepting monkeys and man, glow is reflected light because of the layer of tapetum in the choroid coat of their eye.

(13) *Eugenia Jambolana*.

(14) The author saw the field-mouse being actually devoured. This panther was also shot on the spot and an examination of the disturbed soil proved the details of this event.

(15) Pipal is *Feiis religiosa*.

(16) This panther was actually shot while struggling amidst the branches of the tree. A most curious thing, one which a person could hardly believe unless he is an eye witness to it, had happened. The neck of the panther had been caught as if in a vice in-between the forked branch of the pipal and the projecting branch of a *Terminalia* which grew next to it. The panther, this time a half grown animal, was actually hanging by its neck in mid-air, but was still quite alive. This incident occurred in the forest situated within 5 minutes walk of the spacious forest bungalow at Joldhal, a village 12 miles away from Bhadrawari which is the seat of the Mysore Iron and Steel Works.

For perhaps the space of a full half hour nothing more happened while the temper of the male panther grew each moment more dangerous. It was bad enough to be so hungry as he was, but to be led into a trip by his spouse and then to see her make a meal before his very eyes, this was hardly to be tolerated. All at once he gave a leap to one side, turning in the air as he sprang, and alighted on the ground, with his forepaws outstretched, and claws wide open, just at the edge of a half burnt bush. Out of the corner of his eye he had seen a wild-hen. With his miraculously speedy effort, as of a mighty gun recoiling in action, he had caught his feathered victim just as it was vanishing under the refuge. This was one of those unhappy birds which had attempted to fly out of the pipal tree but had fallen down, its body and feathers getting entangled in a neighbouring clump of thorny bamboo, and in its fall, had tried to disappear behind a dense thorny bush. For a second its strong wings flapped spasmodically, then the panther crunched the life out of it⁽¹⁷⁾. The bird made one mouthful, to be sure, but it was quite as good as a wild-fowl could have been. He licked his chops, gave his spouse a side long look, and walked on.

Slowly the moon rose up the starry sky shortening the shadows of tree and bush. The forest had been rendered more open here, having been recently gone over by the axemen and the fire which followed in their wake. Dense thickets, solitary trees, arrays of stumps and colonnades of tall secondary growth of teak, not yet heavy enough for the woodman's axe, followed one another in bewildering disarray. Suddenly, from a *lantana* bush just ahead, but hidden by another teak thicket, came the sound of gnawing. Both the panthers like automats crouched flat, the long handsome tail of the male twitching and the stumpy one of his spouse wagging. Then, separating, so that each could go on opposite sides of the *lantana* bush, they crept upon the heedless gnawer. As it came in sight of them, they stopped, for it was a full grown porcupine, fat, offensively clad, and indifferent alike to weather and foe.

Full well did the two panthers know that this was no quarry for them. But they could not help yielding to their temptation. They crept nearer, their mouths watering. The porcupine went on gnawing his supper but when the panthers came within a few yards of him, he stopped, put his nose between his forepaws erected his formidable quills, till he was looking like nothing more than a threatening array of pointed needles. The panthers crouched low and eyed him longingly. At last the male, his hunger getting the better of his discretion, stole closer and reached out a prying paw, as if to find out a weak spot in the scornful rodent's armour. His spouse snarled a warning, but at the same moment the rodent's tail—a mighty member covered with the tiniest quills—jerked sharply forward and thrust against the intruder's nose. With a splitting shriek the panther jumped

(17) Panthers are fond of poultry, and in forest villages they often feed on them.

back, half a dozen slender quills sticking in his nose as into a pin cushion. Rub and wallow as he might, he could not get them out, for their recurved edges held on inexorably. All he could do was to break them and proceed, with the broken ends, rankling worse than honey-bee stings in his tender nose. From time to time he plunged his nout in the mud to allay the torment. And his temper was by no means eased⁽¹⁸⁾.

All this, however, never troubled the female panther. Sure, the punishment to her mate had cooled her longing for porcupine flesh ; but she had resumed her efforts of safe hunting. Concern for the consort's suffering never entered her animal heart. He was of importance to her only if they should together find some big-game—a strayed ox or a *sambhur*—for instance, which they could bring down more surely and more easily by acting in unison. There was none of that close and firm intimacy which appears to exist, for instance, between a male and a female deer.

While traversing an array of big tree stumps the two came close together, though they continued to pay each other not the slightest attention. A light, dull footstep caught their quick ears, and both crouched flat. The next moment a grey rabbit shot past them almost grazing their paws. With its large round eyes starting from its head in terror the rabbit rushed past at such a pace that there was no time to strike it down, though the male, who was the furthest from it, made a futile sweep at it with his right front pay⁽¹⁹⁾.

It was clear that some enemy must be following the rabbit, to cause it such mad panic. Whatever it might be the two panthers had little to fear of it. They waited for it, and in the next few moments it came. It came crashing noisily, in full gallop, head thrown forward, a slim, long-bodied, sinuous, fawn coloured beast with anxious eyes. As it galloped past her the female panther made a stroke at it and missed, but in the next split of a second the panther had pounced. He caught the left hind leg of the black-buck with both jaws in mid leap. Indomitable, it writhed up and kicked back its powerful, cleft and pointed hoof in his muzzle knocking out both his canines on one side. But unmindful of the punishment the panther's fangs closed about the slender tendon of its leg to snap it like a wire, crippling the leg, then the fangs closed about its slender neck and crunched its innocent life out of its handsome body. With the hot blood of his prey streaming from his nose and mouth, which eased, however, for a moment the galling ache of the porcupine barbs, he fell to his meat growling harshly over it.

(18) This panther was also shot; a large number of broken porcupine quills were extracted from its nose and from the padding of its paws. Obviously a porcupine had been killed and devoured by it.

(19) The rabbit was actually struck down and devoured.

But with a defiant snarl the male struck at her, clawing viciously the side of her head nearest to him and scooping out one of her eyes. She was, therefore, in no anxiety to force matters with so determined an adversary, especially so because she had spied, at the same moment, at some distance another buck rushing on at full speed in her direction. She quickly drew off and sat down on her haunches to have a better look at the approaching animal. The black-buck was near her in the next moment, but hot on its heels she spied, to her dismay, a couple of wild dogs⁽²⁰⁾. With lightning speed, she then stooped to a springing posture and leaping in the twinkling of an eye she caught her prey by its long slender neck which she wrenched out of shape in the next instant emitting meantime a sharp growl. In her anxiety to hunt she had almost forgotten her sub-conscious fear of the two red enemies she had spied. She now sat back to lick the blood oozing from the neck of her quarry and cleared her throat repeatedly by making a gurgling sound as if in satisfaction of her achievement, though her demeanour betrayed no small amount of anger. All at once her ears caught the fiendish yell of a score of wild dogs which made her start. Looking up she saw standing around her at a respectable distance a whole array of dogs, her mortal enemies. She still remembered her encounter with these animals once before when she was young, and how she had managed to make good her escape, thanks to her fleetness of foot⁽²¹⁾. At first she saw the two of them, the vanguard of the pack, the ones which came close on the heels of the buck, advancing cautiously towards her, shoulder to shoulder, stopping every few paces as if repelled by her piercing gaze. She could tolerate this insolence no longer, nor could she brook her morsel being snatched out of her mouth the moment she had settled down to its full enjoyment. Emitting a piercing growl of warning she sprang like a trained athlete in the direction of her intruders, her fore-paws outstretched, her mouth wide open displaying her ivory white canines, her sharp ears thrown back and whiskers elevated, her single eye spilling hatred and her whole figure couched in the sinister ferocity of a fighting feline.

(20) The wild dog event took place one early summer morning in a forest glade situated about a mile from the forest lodge at Rangiangiri. The author was out trying to shoot wild dogs whose destruction carries a reward. The evidence consisted of two dead black-bucks both having their leg tendons snapped, and one of them also having its neck broken and twisted out of shape, the hopelessly mangled body of a dead panther and six wild dogs lying dead around it. The author saw only that portion of the narrative up to the death of the second buck. The rest was seen by the late retired Forester Lachma Nayak of Lakkavalli, a veteran *Shikari*, who had joined the working plan party under the author as an Enumerator and had accompanied him to the forest that morning. Lachma Nayak saw everything vividly from the top of a neighbouring tree and narrated it to the author on the spot with factual evidence. More evidence of the mischief of wild dogs was gathered by the writer near Muthodi (Kadur district) situated on the Hebbi Muthodi forest road, which was in those days only a dangerous cart-track, and also at Kalere in Mysore district.

(21) Panthers are able to escape from the onslaughts of wild dogs owing to their fleetness of foot and I have oft times seen this happen. Lachma Nayak pointed out the scar of an old wound on the back of the dead panther which he stated, had been caused by the bite of wild dogs.

Her right paw descended on the spine of one of her enemies, broke it and bore down its body scooping out the entrails. Almost at the same instant her eager canines closed-in like a vice on the neck of the second dog severing it from the body as if cut by a pair of gigantic scissors.

She now looked round sharply for her mate, in the hope, perhaps, of getting his help; but he was gone. The buck he had killed for himself lay there, ownerless and glossy eyed, and she was at the mercy of her adversaries who surrounded both her and it. The ring of dogs, now well established, began to close-in upon her, slowly at first, with obvious hesitation, but one among them, the leader, who surpassed the others in build and strength, emitting a yell louder than any of the rest, left the ring and surged forward. As if in shame at their hesitation five more dogs now joined him, two or three preceding him and the rest following close on his heels. They approached the panther step by step, their eyes trained on her movements. The panther, now obviously in fear, looked round frantically for a way of retreat. She espied at first what she thought was a gap in the ring of her enemies but as she dashed for the opening she found the dogs there too; only a *lantana* bush which had hidden them from her view had misled her. Disappointed, she turned round and charged madly at the ring around her, now at one point, now at another, but only to be hurled back each time by the sinister array of the canines which faced her. When she drew back from her unsuccessful efforts she came face to face with the big dog, the leader of the suicide squad, and as her eye was rivetted at what appeared to be this her chief enemy she felt a sharp sting on her left hind leg. Like a powerful spring released from tension, she sprang sharply round and with a valiant stroke of her right paw delivered on its neck and laid the intruder low in the next instant.

She now regained her former position to meet her main adversary, on whom her hatred rested most of all, but before she could act she found the back of her neck and one of her fore-paws caught in the sudden and secure grip of a number of her enemies. With her free paw she struck at the leader, now within striking distance, who went down senseless and with blood oozing from his mouth. She then dealt two mortal strokes at two more members of the suicide squad whom she could reach leaving them writhing with head and neck wounds which soon sapped their life. She now felt completely exhausted. She could not see her adversaries clearly. Her strokes fell wide and missed their target each time. Her free paw, which had so long remained her only weapon of offence, and defence, was itself caught in the jaws of two more of her enemies, the two remaining dogs among those which had entered the ring with their leader.

She soon lay on the ground, prostrate and helpless. As her strength and power of action sank, she found the dogs growing bolder. One caught the stump of her tail and cracked it

between its teeth; this gave her such acute pain that she gave off a mighty roar which made that dog release its hold. Another tore a piece of flesh from her haunches and a third snapped the tendon of her hind leg. She now felt stinging pains all over her body. The torture she was suffering was more than any she ever had known. Blood sputtered from her body in every direction amidst tufts of dry grass and flecks of torn fur. But she, weakened by terror and horror at the incomprehensible fury of her numerous adversaries, had felt overmatched from the start.

In a few minutes her tense body, now nearly motionless, seemed to loosen. Her maniacal uproar which rent the air and echoed through the woods diminished into a panting growl. The dogs continued to worry her body for a few more moments. Then, as if coming suddenly to their senses, they stopped, drew off, eyed her mangled form and withdrew into the bushes. But before the last of her struggling breathing left her once handsome body, now mutilated beyond recognition, she saw lying beside her at least six of her cruel adversaries, their bodies stilled in death, their cruel eyes half open and staring blankly, as their limbs stiffened little by little in the mellow, cool, morning breeze.

The Value of Wilderness

Sixty years ago, forced to squeeze his adventure stories in the small area of Africa still unexplored, H. Rider Haggard wrote: "The world is disenchanted, too soon shall Europe send her spies to all the land". We have come an uncomfortably long way since the days of Rider Haggard, and our ideas of wilderness and exploration have changed. The I.G.Y. and its many discoveries, including the exploration of what was previously considered the Antarctic land-mass, may be said to mark the storming of the last fortress of mystery on our planet; civilisation has, indeed, sent her spies to all the lands. The golden era of exploration on our own planet is at an end and wilderness generally survives on human sufferance alone.

A tolerant and farsighted sufferance has been urged on us often during the last century. Conservation, indeed, has become an accepted part of all planning by governments. Where the destructive exploitation of forests and the wilderness was worst, there, too, have the priests and champions of conservation been the most ardent and active, e.g., the United States. Starting from Thoreau down to the two Roosevelts, the American wilderness could

not have been better served, and the American system of constitutional and statutory preservation of forests and wilderness-areas owes to the wisdom of such men, and remains the model for the most of the world. But wilderness means much more than mere forest wealth or wild life or any one or more objective factors; it goes much deeper, to the roots of Man's relationship with the Universe and with nature.

The problem is to preserve certain substantial areas in the primeval, virgin state, without any sort of outside interference, or guidance. Reserved Forests and planted forests do not serve this purpose, for the utility and significance of true wilderness areas is much more profound than merely providing timber for industry or wild life for the hunter, or even resorts and retreats for city-dwelling tourists. Resorts, for instance, while being most desirable, need planned layouts, roads and rest houses and all the paraphernalia of civilisation; this naturally entails an unavoidable 'culturisation' or control over the area by Man, which must, as will be explained, be avoided.

We in India are just beginning to explore and assess our unused and wild areas, and this is the time for us to evolve a farsighted policy with a view to avoiding the blunders committed by other countries in their exploitation of their own wilderness.

Undisturbed and primeval nature exerts a powerful influence, a siren-like attraction, on Man by virtue of being, ultimately, his true progenitor. This aspect of nature is not merely recreational or aesthetic, but super-aesthetic and spiritual and has, historically, provided the well-springs of creative thought and inspiration. Earthly mystery alone is the one personification of the Divine idea that lies within our reach; God, in all his forms, is the ultimate mystery, the unknown, the cause, and to destroy mystery on earth is to destroy it in our spirits. The sages, 'rishis' and 'munis' were searching for these intangibles when they roamed the Himalayan wilds; the modern naturalist and the better sort of Mountaineer is merely their successor, in his search for mystery to translate into thought.

The more pragmatic would label such ideas 'sentimental rubbish', but the contemplation of, and contact with, undisturbed nature has provided the inspiration to many of our best and wisest statesmen and philosophers. Thoreau was a pioneer in advocating protection of wild animals and wilderness, not for their sake or for providing timber and forest products, but for providing future thinkers and sages and writers with guidance and inspiration. The reserves of nature, he used to say, are the reservoirs of wisdom and philosophic insight. God knows the world will need these things in abundant measure in the trying, adventurous years ahead, with man taking his first hesitant steps in Space.

Even looking at the question from an objective, pragmatic viewpoint, the argument for preserving wilderness is undeniable. All forms of natural vegetation endeavour to strike and

maintain a balance of natural forces. The remarkable coincidence that animals need the very Oxygen which plants exude during photosynthesis, and plants live on the Carbon Dioxide which animals breath out, enshrines the profound truth of the inter-dependence of Man and vegetation; the slightest upset in this balance, which is more precarious than it seems, can lead to disastrous consequences for the human race. Man is adaptable only within the limits of certain strict conditions, and the ratio of Oxygen to other gases in the air is one of them. Forest cover, moreover, provides the best kind of water-trap for preventing rapid run-off of rain water. This ensures a continuous supply of sub-soil water and prevents soil-erosion, both by wind and water. Vegetation attracts rain by maintaining high humidity by transpiration of moisture into the air.

From the educational and scientific point of view, such wilderness parks or preserves offer the best natural museums of the past; veritable giant laboratories for conducting field studies like Genetics, Zoology, Botany and Geology even though these disciplines are becoming increasingly theoretical and academic nowadays. Experiments conducted in controlled or artificial laboratories can never perfectly simulate natural conditions, and experiments carried on in wilderness preserves can thus be used for checking the results obtained in artificial environments.

Who knows but that the future may prove some rare plant to be useful, and this alone indicates the need to preserve all our present species from extinction. Who, for instance, could have foretold that an humble mould would give rise to the wonder-drug, penicillin.

Apart from these tangible benefits, which are the ones most often quoted in our workaday world, there are fundamental intangible values associated with wilderness. The inextricable, relationship between the human race and mother-earth will be valid for a long, long while yet, satellites and science, fiction, notwithstanding. It is impossible to visualise man inhabiting a sterile planet; these obscure, almost metaphysical values are hard to appreciate in the shadow of science and materialism, which is all the more reason for making a real effort to do so.

To quote the case of an agricultural and rural country like our own, most surviving true-wilderness areas in India owe their existence to being either useless for farming or inaccessible. The Himalayan wilds are by far the largest single area of wilderness in India, and have historically been the source of truth and inspiration for countless sages. As for the more useful and tillable parts of the rest of India, the south-east was the last stronghold of mystery and wilderness, and that will soon largely pass into legend when the Dandakaranya scheme is completed; no more will the 'Dandak' forest of the Ramayana personify His existence. Since such schemes are not only necessary but desirable, should we not devise beforehand a planned

policy of leaving enclaves, as it were, of complete wilderness. Reserved Forests and game sanctuaries are not enough. We must have Wilderness Preserves of substantial acreage with no roads or other civilised accoutrements.

Malthus has been so successfully debunked that the grain of profound truth which lurked in his morbid prophecies has also been lost to us.

Today we had Dandakaranya, so we can raise our food production by bringing it under the plough; but what of tomorrow? Should the earth be scourged by a Malthusian disaster, and the possibility is there, judging from present population trends, wouldn't it be wise to have some reserves in the 'bottom of the barrel', which we can scrape up when needed? Hordes of human beings crawling all over the planet are no far fetched fancy. Conditions in many lands already approximate a Malthusian tragedy. Farsightedness and wisdom alone can guide us into a wise utilisation of the limited resources of this planet, upon which depends the continued progress of this, our great society.

H. K. DANG.

NOTICE

Any member who wishes to have a copy of the Society's final Constitution, which has been submitted along with the papers for the Society's registration, may have the same free of cost on application to the Honorary Secretary.

Deputation to the Governor of Uttar Pradesh.

The Governor of Uttar Pradesh was on a visit to Dehra Dun early in September 1960. Members of the Society's Executive Committee, led by the President H. H. The Maharaja of Nabha, waited on the Governor on September 3rd. The Governor evinced great interest in the work of the Society. He was very receptive and quick to understand our problems, which he discussed at great length. Some useful ideas emerged from our talks and all members felt very satisfied that the interview was well worthwhile.

It was suggested that man was encroaching more and more on lands bordering on reserved forests thereby bringing disease common to domesticated animals into contact with wild animals, which are very susceptible. This, combined with man being so near his hunting grounds, was causing the extermination of wild life. While the Governor agreed that this was the case, he felt that the hands of Government were tied because of the fact that there was so little arable land in the country for distribution: Besides when Tribes settled near the jungle one felt morally bound to leave them where they are. He, however, suggested that the creation of sanctuaries was one solution; sanctuaries which are adequately supervised, and with a strict embargo on any fresh settlements.

He was of the opinion that man had upset the balance of nature causing predators like hyenas taking to lifting of human beings, as happened in Lucknow and other places.

The control of rivers and the leasing out of the same by Gram Panchayats for commercial fishing was brought to the notice of the Governor. This had led to a tremendous depletion in stocks of our finest fish, the Mahseer; even the spawning rivers in the higher reaches are being exploited to the full. It was suggested that Panchayats should have nothing to do with the leasing out of rivers, and that this may be vested in the Chief Wild Life Warden, U.P. Lucknow. Hatcheries were also suggested as a measure to re-stock rivers.

The great reduction in the numbers of Black-buck to near-extinction in the Meerut-Muzaffarnagar Districts was also discussed. The Governor felt that these fine animals had probably been pushed into the interior owing to this area now being so heavily cultivated. It was, however, argued that apart from this there had been wholesale slaughter because of the increased number of crop protection guns which were used mainly for the purpose of securing meat. The remedy is either the collection of these guns, or sealing of their actions after the harvest has been collected; also by strict control of the sale of buck shot and buck shot cartridges. Buck shot can be purchased without a license: This item should now be restricted to small quantities, and only on production of a license.

It was brought out that sportsmen are our true conservationists of game. This is an acknowledged fact—but the U.P. Forest Department have not done much to enlist his support, on the other hand they have made it extremely difficult for him to obtain a shooting permit, with the result that a number of blocks lie vacant in the shooting season, leaving them wide open to the poacher. We had asked the Department to re-consider the method for the allotment of blocks. We also asked the U. P. Forest Department to appoint honorary Game Wardens from among sportsmen members of this Society, but we have had no response yet. Honorary Game Wardens are doing sterling service in other States, and there is no reason why they cannot be used in the U. P. to re-enforce the present inadequate game staff.

The Governor felt the need for public opinion, in the matter of the protection of game, to be aroused through Societies such as ours. He further suggested that any cases of infringement should be brought to the notice of the Departments concerned in the proper way. We, of course, pointed out that this was being done but as a rule our suggestions and complaints went unheeded in the U. P. With the formation of a Wild Life Board in the U. P., on the lines of the Board formed in Himachal Pradesh, this Society will have a better medium of approach to the various departments of Government.

The Governor concluded by expressing his good wishes for the work which had been undertaken by the Society, and he agreed to go into the matters represented to Government by the Society. We then presented him with our Brochure, the last issue of the "Cheetal", and handed him the following memorandum for necessary action.

Editor.

"Memorandum Submitted to the Governor of the U.P. by the Wild Life Preservation Society of India."

Introduction.

The Wild Life Preservation Society of India takes the liberty of submitting for consideration of your Excellency, certain points in connection with the preservation of wild life and sporting varieties of fish in the U.P. In doing so the Society has only the desire to serve wild life, preserve the Mahseer of India, the like of which is hard to find in the world along with other animals and birds, and to assist the authorities in the proper management, conservation and control of wild life in the rivers, lands and forests of the State.

The Society.

The Wild Life Preservation Society of Northern India was formed in April, 1958 as the result of a demand from a wide circle of the public for some organisation to effectively work

for improved conditions as regards wild life and sport in Northern India. An abortive attempt at forming a society of a different type was made in 1956, when the U.P. Government was asked to settle the shooting and fishing rights of the Doon forests with the then proposed Society. Now this Society has become the only one of its kind for the whole of India.

The aims and objects of the Society are to represent to the authorities on, and to stimulate public interest in, the great need of protection for wild life, with a view to its increase, both from the public enjoyment point of view as well as that of the shikari-sportsman. The Society is working for wild life on the propaganda and education front and one of its main planks is the education of the public in the correct appreciation of the role of wild life in the country and to inculcate in the youth of the community and of the rural areas in particular, respect and love for wild life together with legitimate sport; in other words to bring up a generation of true sportsmen and conservationists, in future.

Journal.

Soon after its formation, the Society embarked on the publication of a journal "The Cheetal", which appears every 6 months. This has been well received and at the moment, is the only journal of its kind, dealing exclusively with wild life, and is a forum of public opinion on the subject in the country. Details of the work of the Society and its progress since its inception are to be found in this journal and our Brochure, which we herewith present to you with the Society's compliments.

The Society is working in four Committees—Legislation, Fish Protection, Publicity, and Propaganda-cum-Education—and has after due examination made various recommendations to the States on rational close-seasons, bag limits, and practices harmful to wild life; suggestions for rules of entry to Sanctuaries and National Parks; suggested rules for control of fishing etc. It has offered to provide some protection staff out of its meagre funds for the fish in the rivers of the Eastern Doon and has now taken on lease the waters of the Jamuna and Tons junction where a watcher is employed; it has offered to assist the Government through the creation of Honorary Game Wardens; it has reported offences against wild life, to the authorities. In short, it has been playing the role of a 'watch-dog' for wild life, not only in Northern India but also in the whole of India. The Society has now expanded its activities to the whole of India and has dropped the word "Northern" from its name.

Wild Life in the U.P.

The sudden withdrawal of Annual Small Game Permits in the Dehra Dun and Saharanpur Divisions during the last shooting season, hit the local sportsmen hard. The Society has represented against this and has suggested revival of the Annual Small Game Permits. On

the contrary, the Society had suggested abolition of the Annual Big Game Shooting Permits only; and not Annual Small Game and Angling Permits, which is requested should be restored.

The centralisation of the drawing for shooting Blocks at Lucknow, has been widely criticised. The Society had merely recommended that, as far as possible, drawing for shooting Blocks should be held in the headquarters of the D.F.Os. The Society had represented against the draw being held by the D.F.Os. while on tour, when it became impossible for the applicants to witness the fairness of the draw. With the constitution of the District Wild Life Boards, it would be best if all permits for the District are issued by these Boards.

With the existence of a State Wild Life Board, coupled with recognition of a Society such as ours, Government can, at all times, be certain of sound advice, and of public opinion before enacting measures for wild life, and at the same time the Government can depend on us to keep them informed of any infringements of the rules and neglect by the conservation staff.

Special Game Protection Staff.

It has been recognised that Forest Departments, heavily overburdened as they are, are unable to give necessary protection to wild life in their charge, leave alone carrying out sensible wild life management. Special staff for the protection of game has been recommended by the Indian Board of Wild Life. In the U.P. the Game Protection Circle, consisting of a Conservator, five D.F.Os. and other staff was created in 1956. This circle was doing good work and the general public had become encouraged.

In 1958, in the middle of the Financial year, the staff was reduced to a Chief Warden of D.F.Os. status instead of a Conservator of Forests and three Regional Game Wardens of Assistant Conservator of Forests rank instead of five D.F.Os. as previously. Along with this reduction in the superior staff, a number of posts of Forest Guards were however created. It is felt that this reduction in the superior staff has told on the effectiveness of the work of the Game Protection Branch.

Moreover, the Game Preservation Organisation is confined to certain circles only, and elsewhere wild life is left to look after itself, except for the normal protection machinery furnished by the staff of the Forest Department. It may be pointed out that in the Punjab there is a special Game Preservation Staff under a Conservator of Forests, for the areas outside the Reserved Forests, covering the whole State. In Bombay there is a very large organisation consisting of permanent forest officials and where these are not available the civil and police department representatives, supported by a number of Honorary Game Wardens under a Conservator of Forests.

Legislation.

In the U.P. there is practically no protection for wild life in the areas outside the Reserved Forests, where the Wild Birds and Animals Protection Act should apply. The Bombay example of new legislation of an embracing nature, to cover both Reserved Forests and Non-Reserved areas, was recommended by the Indian Board of Wild Life to all the States in India and several States have overhauled their legislation. In this connection, the suggested close-seasons etc. of the Society may be of use for any overhaul of the legislation in the U.P.

Forest Management.

The Sanctuaries and National Parks of the U.P. are subjected to heavy exploitation, grazing etc. The only activity prohibited is shooting, and for all intents and purpose, the Sanctuaries and National Parks are no different from any other forest blocks. Game in these areas, except in the Corbett National Park which is comparatively isolated, is very scarce on the whole. It is considered that this is due to the great disturbance caused by intensive forest operations and the poaching which inevitably follows such operations.

It is suggested that the principle of some sacrifice in revenues be accepted in regard to Sanctuaries and Parks and that selection fellings of a light nature be substituted for the, at present, intensive fellings going on.

Fish Protection.

There is, apparently, no law to protect our sporting fish the Mahseer of India; in particular in the Gram Panchayat sections of the streams and rivers from the hills to the plains. These rivers are being exploited for purely commercial fishing by the Panchayat, while there are no fish hatcheries, to supplement the supply, provided by Government. It is not known whether the Panchayats are under any restriction regarding the use of small size nets, which decimate young fish and thereby threaten the stock of fish, such damaging practices as bunding and diverting of streams, and de-watering them so as to remove all fish from dried stream beds, bombing of pools, poisoning of pools etc. Attempts to obtain information regarding the fishing laws in these areas have been made but without success. Due to the migratory nature of the Mahseer it is no use protecting it in the Reserved Forests alone where it does not stay throughout the year. These fish travel hundreds of miles in the monsoon to breed in smaller hill streams and are completely destroyed in the Panchayat areas while on their way from the forest rivers to the small breeding streams in the hills. The young are destroyed in winter by villagers in these small streams where nature intended them to stay till they could fend for themselves; and they cannot return to the big rivers to grow. It is very strongly recommended by this Society that protection of all rivers and streams from 1500 ft. above sea level to the streams in the higher hills be vested directly in the U.P. Wild

Life Preservation Organisation and the Panchayats should have nothing to do with the leasing out and destruction of a type of world famous sporting fish which can become one of the most important foreign exchange earners, inviting foreign Angler Tourists for sport, and at the same time affording angling opportunities to our own countrymen. Hatcheries to restock and supplement depleted rivers are an absolute must and should be provided without delay and areas fed by hatcheries should be strictly reserved for fishing with rod and line only for anglers and sportsmen.

The Society's Membership.

So far, there has been a very poor response from the U.P. Forest Department in the matter of membership of the Society, even by the senior officers.

Subscription to the Journal.

It is to be noted that the whole of Rajasthan and Andhra Pradesh Forest Departments have subscribed to our Journal, whereas the U.P. has ordered only two copies, one for the Chief Conservator of Forests and the other for the Headquarters Conservator. It is submitted that subscription to the journal is within the reach of all D.F.Os., and should be on Government account. Andhra Pradesh and Rajasthan are buying the "Cheetal" enbloc through the Chief Conservator of Forests for all officers, a list of whom is attached. It is requested that the same procedure be adopted in the U.P. to keep the officers informed regarding the problems of animal and fish life.

Membership of the Society has been made very attractive, through the introduction of Professional Membership, which includes Foresters, Agriculturists, Soil Conservationists and Wild Life Managers. A copy of the "Cheetal" is free to all members.

Response from the U.P. has not been, it is regretted, very satisfactory on the whole. The various matters put up by the Society to the authorities from time to time have met with poor response. There could be, it is felt, greater co-operation of the Forest Department of the U.P. with the work which the Society is doing.

General.

Vide a Resolution No. 5 dated 9th April 1960 adopted by the Executive Committee of this Society, it was decided that the Govt. of U.P. should be approached for reserving a Shooting Block in the name of the Society in the Society's Headquarters at Dehra Dun Division on the same terms and conditions as in the case of the Indian Military Academy. We request you to kindly help in getting this implemented so that the Society may be able

to have the benefit of one Block for its members most of whom are sportsmen and naturalists who have proved to be the most effective Game wardens for the protection of wild life

This Society had recommended to the Govt. of U.P. that Pea-fowl should not be allowed to be killed for export of its feathers; but this suggestion was misunderstood and its shooting has been banned throughout the U.P. This Society is of the opinion that this bird should be allowed to be shot by permit holders, and not more than two should be allowed in a day, to a party. This is a fine game bird and is well protected by villagers due to sentimental grounds, though it is very damaging to crops. Pea-fowl may not be allowed to be shot within one mile of a village or town, in deference to the sentiments of the people; but in the forest areas this question does not arise.

It is reiterated that the Society is pledged to work for wild life on all fronts and any suggestions, comments and criticisms it has to offer, either directly or through the pages of its journal or of the press, are made with the best motives. It is, therefore, hoped that you would be kind enough to help and encourage us by your Government's help and support in this great task."

For and on behalf of

The Wild Life Preservation Society of India.

Col. H.H. Maharaja Sir Pratap Singh,
K.C.S.I., Malvendra Bahadur of Nabha,

President.

Nature Study in Foreign Schools.

A number of foreign schools have nature study included in their curriculum. One such Institution is the Paul Braxton Elementary School, Siler City N.C., USA. They work to correlate their nature study with other subjects.

The school has a Nature Trail out in the country. They have trained persons to accompany the different groups of children on this trail. The children bring back specimens to be studied in the class. It has been found by the School authorities that this is not only of great educational value, but it also creates an healthy interest in the children, opens up their minds, and makes them more observant.

Some of the more interesting subjects for their children are birds, snakes, butterflies, trees, wild-flowers, sea shells, and any other subject a child may be interested in. They had a



Paul Braxton Elementary School, Siler City, North Carolina, U.S.A., where Nature Study is given great importance.



'Bambi' our Barking Deer.

scheme for all children to build Bluebird houses; they got good response to this, and it attracted much attention. A most valuable occupation, as it not only teaches children to use their hands to practical advantage, but it also inculcates imaginative powers, and a creative sense.

Quite a number of the children of this Institution, who are in the fifth form, would like to correspond with children from our country about nature study here. Such exchange of views is to be highly commended, and it is hoped that a vast majority of our children will take advantage of this opportunity, as there are many interesting things in the nature world of other countries which will interest us. The names of the children who wish to correspond are given below, and their address will be Paul Braxton Elementary School, Siler City, North Carolina, U.S.A.

Names of Children—Boys.

Ted Brewer	Beverly Allred
Robert Wrenn	Sandy Shook
Steve Brooks	Jackie Walters
Donny Andrew	Eddie Craven
Steve Moore	Phil Leonard
Jerry Stone	

Girls.

Janice Phillips	Alice Andrew
Christy Williamson	Sandra Robinson
Nancy Petty	Ellen McLaurin
Brenda Andrew	Ann Paige
Sue Fesmire	Jane Williams
Jane Townsend	Sue Yow

—Editor

Young People's Corner.

"BAMBI OUR BARKING-DEER"

He was brought to me by my son Bulu, who had persuaded his Aunt Dolly to buy him for the large sum of seven rupees. "Mummy" he entreated, his blue-grey eyes full of persuasion, "may we keep him"?

There he stood, shaky on his legs, all leggy and scraggly looking and it was then that I discovered that his naval cord was hanging a good two inches long and had not even healed as yet, so he must have been a very, young deer. I nodded, knowing that now everything rested on me, for with all the pets my children bring home, it is I who look after them and care for them and vet them! The children have the pleasure of having them around, but on me depends the responsibility of seeing they are well, however as I am a great lover animals I must confess that I enjoy it all, even though I do grumble sometimes.

And so it came about that Bambi entered our household. "Uncle Nand says that you will never be able to rear him Mummy", said Bulu with the forthright honesty of the young. "What does Uncle Nand know about animals, bar shooting them?" I assured him, feeling most unsure myself.

However, I found a large wooden packing-case, and packed it with straw and into this comfortable bed, I put Bambi. The only part of his anatomy that was visible were his ears. It took me days to get him accustomed to the feeding-bottle, but once he caught on he loved it and looked forward to his feeds. Now the trouble arose to find the proper mixture for his feed. By trial and error I found the happy medium, not too rich or his tummy would get upset, not too weak for then it meant that he was not getting the required strength in his nourishment. Eventually, I got it right, with Robinson's patent barley and cow's milk, half and half. And whenever the tummy went out, Sulfaguanidine and Thiazole came to the rescue. He was a very delicate little thing and sometimes I was very sceptical about his surviving. Each morning I dreaded going into the bedroom for fear of finding him cold and stiff and dead. But each day the tweaking of the large ears and raising of the little head at the sound of my tread was a happy start to the day.

And so Bambi grew up with us, frolicking about the garden with the abandon of a care-free animal. He always knew his feedtime and just like clockwork there he would be at my side to remind me, often pulling at my frock and taking me along to the pantry to prepare his milk. I always gave him cod-liver oil and calcium in his feeds and he literally thrived on

it all. Soon the day came when he had no further need of milk, but was quite content to graze around the garden, having, of course a preference for my prize roses to grass!

At that time we had a peacock who answered to the high sounding name of Mumtaz, and the two pets were very fond of one another's company. Mumtaz had a passion for having his head scratched and often would come to me in the verandah while I was mending or reading and put his head into my lap and I would scratch it. Soon his eyes would close in sleep and for sometime he would be oblivious to time and place. One day Mumtaz requested Bambi to scratch his head and put it down for him to do so. Bambi inspected the top of his crown with interest, and then detecting what he presumed to be a tuft of grass, promptly proceeded to nibble it right away and Mumtaz lifted his head minus his crest! It was all so amusing that I could not contain my laughter, loud and long, but Mumtaz could not conceive what there was to laugh about and flew away. As for Bambi he appeared bored, shook himself and went away to explore new pastures.

Bambi, by the way, was a born athlete and enjoyed a good game of football with the boys. He would rush about madly after the ball and then would get down on his forelegs and with his head score a goal. I enjoyed watching Bambi's antics, but the children were very disgruntled as he always commandeered the ball and so it was a case of "Mummy, please call Bambi, he is spoiling our game". And call him I would, but did he listen—never!

In time Bambi developed into a graceful little animal. His eyes were the most outstanding feature in his face—they were large with beautiful eyebrows and he knew how to use his charm alright. He was a timid little thing, and reminded me of a ballet dancer with all the grace, and poise. As time went on he matured and the 'honk, honk' was often heard—the unmistakeable sound of the barking-deer. His little horns were coming right out too. I had tied to his neck a ribbon with a bell attached, so that I might know in what part of the garden to find him in. He answered to his name and often played at hide and seek with me. Some friends of ours came to stay with us once and brought along with them their Irish terrier called Satan, who was the best mannered dog that I have yet come across. Satan and Bambi took to one another forthwith and were good friends, Bambi even permitted Satan to hug him once.

We have a swimming-pool in our home and we had it covered with a bamboo matting to keep the leaves out. Bambi, inquisitive as ever, discovered it and decided to get across from one side to the other. "Plonk", into the water he fell and I went too trying to save him, forgetting for the moment that all animals instinctively know how to swim. Incidentally, I do not, but had not figured that out in my anxiety, so I jumped my son to the rescue, shout-

ing "really mummy, you are a scream". Bambi, I must admit, was a very clean animal, and from an early age appeared to know that one had to go out-of doors for certain purposes and so his house manners were superb. Even at night if he desired to go out he would call out to me, "ma-a, ma-a", just like the goats do and I would get up and let him out.

One day a friend of ours, Bill by name, called over and while we were talking he spotted some flowers in the garden that were new to him, so off we went to inspect them. As Bill bent right down and buckled his knees under him, down got Bambi, right on his forelegs, into the posture for butting a nice big football, which was what Bill's stern presented. Fortunately, Bill stood up a split second before Bambi butted him. I burst out laughing and had to let Bill into the joke.

It was while I was away for a holiday in the hills that Bambi strayed from home, presumably searching for me. And call it premonition or what you will, I had the uncanny feeling that all was not well with him. My friend came to see me off at the taxi-stand and noticed my dejected mood. "Maisie", I said "I fear that I will not see Bambi when I return, something right deep down inside warns me that he is either dead or that he has strayed into the jungles". And I was right, for when my husband met me at the station his first words were "Bambi is lost, we cannot find him. Some villagers say they saw him in the jungle". I'll always remember that afternoon, going through the forests calling his name. But he was not within ear-shot, or surely he would have come bounding at my call.

It was the next day that we heard '*khubber*' that a deer had been shot nine miles away from us. We piled into the car and got to the village. "Yes," the villagers declared, "the headman had shot a barking-deer". And then the story slowly unravelled itself. The villagers seeing a deer had in their usual way given chase. On and on, village after village joining in the game, till at last someone broke his leg and the headman took up his muzzle-loading gun and shot him dead.

It made me so sick inside. You know the feeling you get right in the very pit of your tummy when you are going to school—the train is approaching, already its headlight is in view and goodbyes are to begin. Well, I felt just like that. My heart was sick and sad and heavy. I remember the headman offering me his village hospitality of a glass of milk. I refused it. Never could I accept food or a drink from the hands that shot my deer, for I felt that the villagers must have known it to be a tame deer. Even if Bambi's leg was broken I could have put it into splints and plaster of Paris.

What pained me most was his tragic death. That he who loved human beings so much, should meet his untimely end at their hands. I felt that the sun had gone out of my sky and

I cried long into the night and when the dawn crept in I had dropped off into an exhausted slumber. As time went on, the wound got more bearable and soon I began to realise that that was just a chapter in the book of my life. Bambi and I had enjoyed it from page to page, completely, happily and freely, an animal and a human being. And often I turn over those pages in my mind and often we talk about him, with his photographs in our drawing-room always to remind us that he belonged to us.

The Grove,
Hazaribagh—Bihar.

Yvonne Imam.

WILD LIFE PLEDGE

“Born and brought up in the land of Lord Buddha and Mahatma Gandhi, I give my solemn pledge to protect my country's forests and their voiceless denizens from wanton and wasteful destruction.”

शिकार की कुछ विशेष घटनाएँ

चौ० भगवानदास खुराना, पी.एफ.एस., (अवकाशप्राप्त)

(श्री तुलसीनारायणसिंह द्वारा लिखित "शिकारी और शिकार" नामक पुस्तक के आधार पर)।

बहुत दिनों की बात है कि एक आदमखोर शेर हमारे गाँव के समीप आकर बहुत हानि पहुँचाने लगा। इस शेर के शिकार के लिए बहुत से शिकारी गये किन्तु स्वयं शिकार बन गये। एक दिन उस शेर ने एक चमार को मार गिराया। उसने थोड़ा उसे खाया और शेष को एक झाड़ी में डाल कर वह जंगल में चला गया। एक शिकारी को जब यह ज्ञात हुआ तो वह जंगल में गया और उसने उस चमार की लाश को ढूँढ निकाला। शिकारी ने लाश को एक पेड़ के नीचे रख दिया और उस पेड़ पर एक मचान तैयार किया और साथ ही मचान के नीचे एक ओदी भी बनाई। ओदी बनाते समय उसे एक बन्दर इधर-उधर घूमता हुआ दिखाई दिया। शिकारी थोड़ी देर बाद ओदी में जा बैठा। वह बन्दर फिर ओदी की तरफ घूमता हुआ तथा बार-बार उसे देखता हुआ जंगल की ओर चला गया। शिकारी थोड़ी देर ओदी में ही बैठा रहा लेकिन नीचे बैठना ठीक न समझ कर मचान पर जा बैठा। ऊपर उसने डालियों, टहनियों तथा पत्तों से अपने आप को छुपा लिया और जम कर बैठ गया। सन्ध्या समय वही बन्दर दौड़ता हुआ आता दिखाई दिया। शेर उसके पीछे आ रहा था इस तरह बन्दर और शेर को आगे पीछे देख कर शिकारी को बड़ा आश्चर्य हुआ। शेर सीधा मचान की ओर लपका आ रहा था। बन्दर के गुजरने पर शेर ओदी को बिखेरने लगा। शिकारी ने तुरन्त गोली मार दी। शेर वहीं पर धराशायी होगया। शेर के गिरते ही बन्दर जो दूर बैठा था शिकारी पर झपटा परन्तु शिकारी ने उसे भी गोली से मार गिराया। शिकारी ने नीचे उतर कर देखा कि शेर बिल्कुल अन्धा था तो उसके आश्चर्य का ठिकाना न रहा। शेर अन्धा होते हुये भी बन्दर की सहायता से ओदी के ऊपर इस प्रकार आया जैसे उसे दिखलाई पड़ रहा हो। शेर कब व कैसे अन्धा हुआ और उसने बन्दर को किस प्रकार समझाया होगा? ईश्वर ही जाने।

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शेर संकट से बचने के लिये पानी में तैर कर निकल सकता है किन्तु शेर को नदी, पोखर इत्यादि में नहाते तथा क्रीड़ा करते देखा गया है। ये अपने सम्पूर्ण परिवार के साथ आनन्द मनाते हैं। कभी-कभी भोजन, स्नान इत्यादि दिनभर नदी के किनारे चलता रहता है। एक समय देखा गया कि एक शेर, शेरनी तथा उसके दो बच्चे एक पाठे को खा रहे थे। थोड़ा खाने के बाद वे पास में पानी से भरे तालाब में कूद कर तथा तैर कर मनोरंजन करने लगे। शिकार को सूना देखकर कौए तथा गिद्ध आ पहुँचे और खाने में रत होगये, शेर ने जब यह देखा तो शिकार की ओर बढ़ा और पक्षियों पर हमला कर दिया। दो गिद्ध घायल हो गये। शेर उन्हें छोड़ छाया में जा बैठा। शेर के दोनों बच्चे वहाँ पहुँचे और उन जख्मी गिद्धों से मनोविनोद करने लगे, गिद्ध डरकर इधर-उधर भागने का प्रयत्न करते किन्तु शेर के बच्चे उन्हें धमकाते थे। यह क्रम सुबह ६ बजे से दोपहर दो बजे तक चलता रहा। शेर, शेरनी व बच्चे कभी नहाते, कभी हंसते तथा किसी समय शिकार खाते, फिर थोड़ी देर छाया में विश्राम करते थे, किन्तु जब भी पक्षी तथा गिद्ध शिकार को छूते तो बच्चे उन जख्मी गिद्धों को सताते थे।

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अधवेसरा (पेंथर) को पेड़ पर चढ़ते हुये मैंने अनेक बार देखा है। यह बिल्ली के समान पेड़ पर चढ़ता है। विशेष बात तो यह है कि वह अपने शिकार को मुँह में पकड़े हुये पेड़ पर चढ़ जाता है फिर शिकार को ऊपर टांग देता है। यह कुत्ता, बकरी तथा गधे का भी शिकार करता है। एक समय एक अधवेसरा एक चरवाहे के देखते-देखते एक बकरियों के झुन्ड में कूद पड़ा। एक बकरी को उसने मुँह में दबाया और भाग निकला। ग्वाले के कुत्तों ने उसका पीछा किया। अधवेसरा तुरन्त ही बकरी को लिये हुये एक पेड़ पर चढ़ गया। कुत्ते नीचे से भौंक रहे थे और अधवेसरा पेड़ पर चढ़े हुये ऊपर से गुर्रा रहा था। उधर से एक गुजरते हुये शिकारी ने यह दृश्य देखा, उसने तुरन्त गोली चलाई, किन्तु अधवेसरा भाग निकला और झाड़ियों में ओझल हो गया।

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सूअर शिकारी जानवरों में शेर और अधवेसरों से भी अधिक भयंकर तथा खतरनाक होता है। यह घायल हो जाने के पश्चात् बड़ा ही खतरनाक हो जाता है। इरादे का यह बड़ा पक्का होता है, मर मिटना अथवा मार बैठना ही इसका लक्ष्य होता है। घायल अवस्था में हाथी भी इससे टक्कर नहीं भेल सकता है। प्रायः देखा गया है कि यह हाथी के पैरों में घुस कर उसका पेट फाड़ डालता है।

सूअर एक बहादुर, दृढ-प्रतिज्ञ तथा बुद्धिमान जानवर होता है, अनेक लोग खाने के लिये इसे पालते हैं। इसको शिक्षा देकर अनेक कार्यों में लाया जा सकता है। यह जंगल में जा कर मवेशियों को चरा ला सकता है, यदि मवेशी इधर-उधर हो जाते हैं तो यह उन्हें डरा कर वापिस अपनी जगह ला कर सन्ध्या समय घर ले आता है। गेडवाड़ (मारवाड़) में ऐसे अनेक सूअर जागीरदारों के यहाँ पले रहते हैं। बधनोर के ठाकुर साहब के यहाँ चार सूअर हैं जो शिकार में सहायता करते हैं। शिकार के समय उन्हें जंगल में छोड़ दिया जाता है, वे जंगली सूअरों के साथ जा मिलते हैं, जब हांका किया जाता है तो अगुआ होकर आगे-आगे चलते हैं और झुन्ड को शिकारगाह की ओर ले जाते हैं। शिकारी जंगली सूअरों का शिकार कर लेते हैं। पहचान के लिये इन्हें काला रंग दिया जाता है। जब कोई अधवेसरा घायल होकर भाग निकलता है तो सूअर उसके खून को सूँघते-सूँघते उसके पास पहुँच जाते हैं और उसे पकड़ कर मार गिराते हैं, फिर घसीट कर मालिक के पास ले आते हैं।

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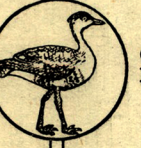
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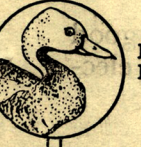
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